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I. *On new or little-known Xylophilidae.* By GEORGE  
CHARLES CHAMPION, F.Z.S.

[Read November 3rd, 1915.]

PLATES I, II.

THIS paper contains descriptions of the numerous unnamed Xylophilidae in the British Museum, some remarks on various known species, and a few corrections in synonymy. The Asiatic forms\* are mainly from the collections of Doherty (two only of these having been previously described) and Mr. Andrewes, supplemented by two recently received from Bengal; those from South America are from various sources, some of them from the Fry collection. So far as I am aware no Xylophilid has hitherto been recorded from Siam, the Andaman Islands, or China. Since the publication of my monograph of the Central American forms (1890-1893), supplemented subsequently by other papers on certain Antillean, Australian and Japanese members of the family, upwards of 200 Xylophilidae have been named by Pic. Extremely few of these latter, however, appear to be represented in the collections before me; but this is not surprising, taking into account the general rarity and restricted habitat of these fragile insects,

\* Exclusive of those from Ceylon, Borneo and Penang enumerated by myself in Ann. and Mag. Nat. Hist. (8) xvi, pp. 215-226 (Sept. 1915), and Ent. Monthly Mag. li, pp. 278-288, 310 (Oct. and Nov. 1915), respectively.

so many of which are unique in collections. If the specimen is a male, there is little risk of adding to the synonymy in describing new species from a single example,\* the characters to be found in the legs or antennae being often particularly well marked in this sex, sometimes, indeed, of an extraordinary or unexpected nature. No new genera or subgenera are added in the present paper, and dichotomous tables of species are of little or no value unless both sexes are known. *Xylophilus* doubtless requires splitting up, but to do it on the characters used by Casey a very large number of "genera" would be required.† The Xylophilidae are constantly confused in collections with the much more abundant and more widely distributed Anthicidae, which they may perhaps be said to mimic; they are, however, always recognisable by their tarsal structure ‡ (the tarsi having each a minute, short, nodiform, penultimate joint preceded by a very much longer, inferiorly produced, lobed joint), the fusion of the first and second ventral segments of the abdomen, and the broad apical joint of the labial palpi.

The new species described are from the following regions: India (including Burma), 31, 4 of them also occurring in Siam, about a dozen others having been previously recorded from the same region; Siam, 8, including three found in Tenasserim and one in Ceylon; Perak, 3; Sumatra, 1; Selangor, 1; Larat, 1; China, 5; Australia, 4; New Zealand, 1; S. Africa, 3; South America (including Trinidad), 11; Lesser Antilles, 2.

Mr. Andrewes has kindly lent me the co-types of two Indian species of *Xylophilus* described long ago by Fairmaire; and Mr. Bryant the types of two remarkable forms from Trinidad and two from Ceylon, all four recently named by Pic; figures of these latter are appended to the

\* Out of 17 species captured by Mr. Bryant during his recent expedition to Borneo and Penang, 12 occurred singly.

† This author, in 1895, placed the 37 recognised N.-American species under 13 genera, but all his new generic names (including *Axylophilus*, which is doubtless valid) have been sunk as subgenera in Pic's Catalogue (1910).

‡ Misunderstood by the artist employed by Mulsant, whose figures of the tarsi of *X. pygmaeus*, de Geer (cf. Colligères, pl. 1, figs. 1, 2), appear to have been taken from an Anthicid! Pic's illustrations, too, in Wytzman's "Genera Insectorum" are all incorrect in this respect, including those copied (wrongly) from the "Biologia." Lewis's figure, too, of *X. distortus*, Champ., is inaccurate.

present paper. Mr. Hugh Scott found three *Xylophili* in the Seychelles, which will be dealt with elsewhere. Amongst a few forms detected in the Oxford Museum subsequent to the publication of my notes on the species of the group occurring in Ceylon (Ann. and Mag. Nat. Hist., Sept. 1915), the following may be mentioned: *Euxylophilus principalis*, Champ., ♂; *Xylophilus palliditarsis*, Pic; *X. orientalis*, Champ., and an insect here described under the name *X. bigeminatus*: all these were received from Thwaites, in 1873, from the same island.

## NEW SPECIES DESCRIBED.

1. <i>Hylobaenus fracticornis</i> , Assam.	36. <i>Xylophilus andrevesi</i> , Nilgiri Hills.
2. " <i>raricornis</i> , Siam and Tenasserim.	37. " <i>parvicollis</i> , Assam.
3. <i>Xylophilus podagricus</i> , Siam and Tenasserim.	38. " <i>siamensis</i> , Siam.
4. " <i>arthriticus</i> , Assam.	39. " <i>annulicornis</i> , Tenasserim.
5. " <i>pulvinatus</i> , Siam and Tenasserim.	40. " <i>fuscototatus</i> , Bengal.
6. " <i>cylindricornis</i> , Assam.	41. " <i>megaloccephalus</i> , Larat.
7. " <i>tavoyanus</i> , Tenasserim.	42. " <i>bigeminatus</i> , Siam and Ceylon.
8. " <i>perakensis</i> , Perak.	43. " <i>pectinatus</i> , Hong Kong.
9. " <i>axillaris</i> , Assam.	44. " <i>spinimanus</i> , Hong Kong.
10. " <i>melanotus</i> , Assam.	45. " <i>parvidens</i> , China.
11. " <i>patkainus</i> , Assam.	46. " <i>chinensis</i> , China.
12. " <i>meranganus</i> , Sumatra.	47. " <i>quadratipennis</i> , China.
13. " <i>latericius</i> , Siam.	48. " <i>darwinensis</i> , Port Darwin.
14. " <i>clavipes</i> , Tenasserim.	49. " <i>luniger</i> , Moko Hinou Isl., New Zealand.
15. " <i>trinotatus</i> , Tenasserim.	50. " <i>albopilosus</i> , Natal.
16. " <i>flavofasciatus</i> , Assam.	51. " <i>macrocephalus</i> , Natal.
17. " <i>ephippiatus</i> , Tenasserim.	52. " <i>ovatis</i> , Mashonaland.
18. " <i>denticollis</i> , Belgaum.	53. " <i>ingens</i> , Brazil.
19. " <i>nilgiriensis</i> , Nilgiri Hills.	54. " <i>triguttatus</i> , Brazil.
20. " <i>linearis</i> , Burma.	55. " <i>prehensus</i> , Amazons.
21. " <i>barbicornis</i> , Nilgiri Hills.	56. " <i>rectifasciatus</i> , Brazil.
22. " <i>glaucus</i> , Perak.	57. " <i>insularis</i> , Brazil.
23. " <i>claviger</i> , Siam.	58. " <i>latefasciatus</i> , Amazons.
24. " <i>penicillatus</i> , Manipur.	59. " <i>amazonicus</i> , Amazons.
25. " <i>rufonotatus</i> , Perak.	60. " <i>dryophiloides</i> , Brazil.
26. " <i>furcatimanus</i> , Tenasserim.	61. " <i>flavipes</i> , Brazil.
27. " <i>andamanensis</i> , Andaman Is.	62. " <i>fuscofasciatus</i> , Brazil.
28. " <i>curtus</i> , Assam.	63. " <i>trinitatis</i> , Trinidad.
29. " <i>holosericeus</i> , Punjab.	64. " <i>hulticoides</i> , Grenada, W.I.
30. " <i>sellatus</i> , Nilgiri Hills.	65. " <i>atomarioides</i> , St. Vincent, W.I.
31. " <i>troglydites</i> , Selangor.	66. " <i>duplocinctus</i> , Queensland.
32. " <i>plumbeus</i> , Kanara.	67. " <i>fergusoni</i> , New South Wales.
33. " <i>uncifer</i> , Bombay.	68. " <i>fracticolis</i> , New South Wales.
34. " <i>tundiceps</i> , Bengal.	
35. " <i>tortipes</i> , Siam.	

## HYLOBAENUS, Pic.

1. *Hylobaenus fasciatus*. (Plate I, fig. 1.)

*Hylobaenus fasciatus*, Pic. Ann. Soc. Ent. Fr. 1912, p. 272; Champ. Ann. and Mag. Nat. Hist. (8) xvi, p. 215.

*Hab.* CEYLON, Galle [type] (*Bryant*); TENASSERIM, Tavoy (*Doherty*).

The Ceylon type is figured, the Tenasserim example recently recorded by myself having darker legs.

2. *Hylobaenus fracticornis*, n. sp. (Plate I, fig. 2,  
antenna, ♂.)

♂. Moderately elongate, shining; piceous, the palpi and legs (the infusate posterior femora excepted), an elongate-triangular patch on the disc of the elytra before the middle (extending forwards to near the base), and a small spot near the suture before the tip, testaceous, the antennae with joints 1 and 2 and 8-11 rufescent, the others almost black; clothed with fine, sericeous, cinereous pubescence; head and prothorax densely, finely, the elytra a little more coarsely, punctate. Head strongly deflexed; eyes very large, contiguous; antennae moderately long, stout, joint 2 shorter than 1, subcylindrical, about as long as broad, 3 triangular, about as long as 2, 4-7 abruptly wider and very strongly transverse, 8 nearly as long as 5-7 united, sublunate (narrow at the base and arcuately dilated at the apex within, the concave inner portion pilose), 9 and 10 subquadrate, 11 ovate. Prothorax broader than long, convex, somewhat uneven, subparallel-sided, and feebly constricted at the base. Elytra much wider than the head and prothorax, subparallel, broadly and obliquely depressed on the disc below the base, and somewhat tumid near the suture anteriorly. Legs moderately long, slender, the posterior femora strongly clavate; anterior tibiae and basal joint of posterior tarsi almost straight; posterior tibiae bowed, slender.

Length  $1\frac{1}{2}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One male. The extraordinary structure of the ♂ antenna is unique, so far as I am aware, amongst the Xylophilids, though there is a minute New Zealand form (*X. luniger*, Ch.) with the seventh antennal joint somewhat similarly shaped in the same sex.

3. *Hylobaenus varicornis*, n. sp.

Moderately elongate, robust, shining; piceous, the palpi, legs (the infusate posterior femora excepted), and apex of abdomen testaceous, the basal and apical margins of the prothorax, and joints 1, 2, and 11 of the antennae, rufous; densely, finely punctate, thickly clothed with greyish, sericeous pubescence. Head strongly deflexed; eyes very large, contiguous; antennae stout, moderately long, joints 1 and 2 much thickened, 3 scarcely longer than 2, 3-10 gradually becoming a little wider and more angular, 11 ovate. Prothorax convex, about as wide as the head (including the eyes),

broader than long, subparallel-sided. Elytra broader than the head and prothorax, moderately long, subparallel, obliquely depressed on the disc below the base. Legs long; posterior femora feebly incrassate; posterior tibiae slightly curved in ♂; basal joint of posterior tarsi strongly arcuate.

Length 2 mm.

*Hab.* SIAM, Renong [type]; TENASSERIM, Tavoy.

Two specimens, assumed to be sexes, the one from Siam having the posterior tibiae distinctly curved, both taken by Doherty. It is quite probable that these insects should be referred to *H. (Phytobaenus) indicus*, Pic, from Mahé, Malabar; but as the latter is described as having the prothorax longer than broad, and the antennae reddish (a character relied upon by Pic in his comparative remarks under *H. notaticollis*, from New Guinea), the identification is too doubtful to be accepted. The normal antennae, immaculate elytra, more slender posterior femora, and arcuate basal joint of the posterior tarsi, readily separate the present species from *H. fracticornis*.

#### NOTOXEUGLENES.

*Notoxeuglenes*, Pic, Ann. Soc. Ent. Fr. 1912, p. 281.

Mr. Bryant has been kind enough to lend me for examination the type of this genus, *N. impressithorax*, Pic, found by himself in Trinidad, in Feb. 1903. It is certainly a male, and the broadly rostrate head (which is flattened in front and produced beyond the labrum) may be peculiar to this sex. The posterior femora are exceedingly stout, clavate, arched in front, and armed with a small tooth at about the middle beneath. The posterior tibiae are short, and subarcuately dilated externally.

The genus was described in a paper on Anthicidae and Hylophilidae, and the particular family to which the insect belonged was not indicated by the author. The type (♂) is figured on Plate I, figs. 3, 3a.

#### EUXYLOPHILUS.

*Euxylophilus*. Champion, Ann. and Mag. Nat. Hist. (8) xvi, p. 215 (Sept. 1915).

1. ***Euxylophilus principalis***. (Plate I, figs. 4, ♀; 4a, hind leg, ♂.)

♀. *Euxylophilus principalis*, Champ., loc. cit. p. 216.

♂. Antennae with the serrated joints 5–10 less widened and more strongly serrate than in ♀; the short anterior tibiae slightly curved, unarmed at the tip (as in ♀); basal joint of anterior tarsi thickened; posterior tibiae armed with a short curved spur at the inner apical angle; basal joint of posterior tarsi more strongly curved than in ♀.

*Hab.* CEYLON (*Lewis*, in *Mus. Brit.*, ♀, type; *Thwaites*, in *Mus. Oxon.*, ♂).

Since the description of *E. principalis* was published, a ♂ has been detected in the Oxford Museum, showing that the type was a ♀. It is considerably smaller than the latter, and has the testaceous markings on the elytra more extended. The apical armature of the tibiae in the ♂ of this insect is transferred to the posterior pair, and the anterior pair are feebly developed, the spur, when present in the ♂, arising from the anterior tibiae in all the other species of the group known to me. The terminal dorsal segment of the abdomen is not covered by the elytra in either sex. The type is figured, also the hind leg of the ♂.

XYLOPHILUS, Latr.

*Asiatic Species.\**

1. ***Xylophilus podagricus***, n. sp. (Plate I, fig. 5, ♂.)

♂. Moderately elongate, rather broad, shining; nigro-piceous or picous, the palpi, prothorax, elytral humeri, anterior legs, intermediate and posterior tarsi, and the intermediate femora and tibiae in part, testaceous, the antennae infuscate, with the joints 9–11 testaceous; the head and prothorax densely, finely, the elytra more coarsely, punctate; clothed with long, cinereous pubescence. Head short, narrowly, subangularly extended on each side behind the eyes, the latter very large, deeply emarginate, and subapproximate in front; antennae long, moderately stout, joint 1 curved, about as long as 2 and 3 united, 3 short, 4 about twice as long as 3, 4–10 subcylindrical, gradually decreasing in length, 11 as long as 9 and 10 together, stout, obliquely acuminate. Prothorax rather small, transversely subquadrate, obliquely narrowed anteriorly, the disc

\* Those from China are placed under a separate heading.

without definite impression. Elytra comparatively short, much broader than the head, narrowing from a little below the base, the usual depression on the disc almost obsolete. Legs long; anterior tibiae almost straight on their outer edge, hollowed towards the apex (and thus appearing sinuous) within; intermediate femora curved; intermediate tibiae broadly, triangularly dilated externally; posterior femora curved, strongly incrassate, furnished with a broad, pallid, setose pad along their lower face, and with a long slender tooth at the inner apical angle; posterior tibiae strongly dilated, sinuous; basal joint of posterior tarsi feebly curved.

Length (with head extended)  $2\frac{1}{3}$ - $2\frac{1}{4}$ , breadth 1 mm.

*Hab.* TENASSERIM, Tavoy [type]; SIAM, Renong.

Three specimens, captured by Doherty. The peculiar form of the legs in this species will enable it to be readily identified, at least in the male sex. The posterior femora appear to be ciliate as seen from above, the slender straight tooth at the tip being about as long as the setae.

2. *Xylophilus arthriticus*, n. sp. (Plate I, figs. 6, 6a, b, ♂, legs.)

♂. Moderately elongate, broad, robust, shining; black, the trochanters and tarsi testaceous; the head and prothorax densely, the elytra coarsely, punctate; clothed with long, decumbent, cinereous hairs. Head short, broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about one-third of their width; antennae moderately stout, joint 2 short, 3 nearly twice as long as 2 (the other joints missing). Prothorax convex, broader than long, subquadrate, narrowed in front, unimpressed on the disc. Elytra moderately long, wider than the head, gradually narrowing from a little below the base, the disc with a deep oblique depression, the space between it and the suture appearing tumid. Abdomen clothed with long hairs, broadly excavate and bare down the middle. Legs long; anterior and intermediate femora moderately thickened, the posterior pair strongly incrassate and furnished with a broad, pallid, spongy pubescent pad along their lower face; anterior tibiae (fig. 6) sinuate, dilated towards the base, mucronate at the tip; intermediate tibiae (fig. 6a) sinuate, broadly foliaceous, deeply, obliquely emarginate externally; posterior tibiae (fig. 6b) bowed at the base, and widened and almost straight thence to the apex; tarsi rather stout, the basal joint of the posterior pair feebly curved.

Length  $2\frac{2}{3}$ , breadth  $1\frac{1}{10}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One specimen. This species is related to *X. podagricus*, differing from it in the less curved intermediate and posterior femora, the deeply, obliquely emarginate outer edge of the still broader intermediate tibiae, the non-dentate posterior femora, the broadly excavate ventral surface, etc., of the male. *X. oedipus*, Pic, from the Island of Banguay, near Borneo, seems to have similar tibiae in the same sex, but it differs in various respects from *X. arthriticus*. The Japanese *X. distortus*, Champ. (1890), figured by Lewis in 1895, also approaches *X. arthriticus*.

### 3. *Xylophilus pulvinatus*, n. sp.

Moderately elongate, rather broad, robust, shining; ferruginous, the palpi and tarsi (the infuseate basal joint of the intermediate and posterior pairs excepted) testaceous, the eyes, antennae (the base and tip excepted), and femora and tibiae in part, nigro-piceous or piceous; the head and prothorax closely, finely, the elytra more coarsely, punctate; clothed with rather long, pallid, decumbent hairs. Head short, moderately broad, very narrowly, subangularly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their width; antennae (♂) stout, long, joint 2 short, half the length of 3, 3-10 subcylindrical, almost equal in length, and gradually becoming slightly wider, 11 ovate, obliquely acuminate, (♀) shorter, and with joint 3 less than twice the length of 2. Prothorax large, convex, transversely subquadrate, broader in ♀, obliquely narrowed in front, unimpressed. Elytra much wider than the head, comparatively short, narrowing from the basal third, with a deep, oblique depression on the disc below the base. Legs long. ♂. Anterior tibiae slender, almost straight, armed with a long, fine spur at the inner apical angle; intermediate tibiae distinctly sinuate, slightly widened outward; posterior femora strongly clavate, furnished with a broad spongy-pubescent pad along their lower face (appearing closely ciliate as seen from above), the other femora rather slender; posterior tibiae deeply sinuate, moderately broad; basal joint of posterior tarsi areuate.

Length  $2\frac{1}{2}$ - $2\frac{4}{5}$ , breadth  $1-1\frac{1}{5}$  mm. (♂ ♀)

*Hab.* SIAM, Renong [type, ♂]; TENASSERIM, Tavoy [♀].

Described from two specimens found by Doherty. A broken third example (♀?) from the Patkai Mts., Assam, with a much broader head may also belong here. The



ferruginous, shining, sparsely pilose body, the stout, infusate antennae, the partly infusate legs, and the sexual peculiarities of the ♂, sufficiently distinguish *X. pulvinatus*. The pad on the posterior femora is conspicuous.

4. *Xylophilus cylindricornis*, n. sp. (Plate I, fig. 7,  
anterior leg. ♂.)

♂. Moderately elongate, broad, robust, shining; nigro-piceous, the palpi, mouth-parts, tip of antennae, prothorax, base of elytra, under surface in part, anterior legs, intermediate and posterior femora at base, and the tarsi of the same legs in part, ferruginous; head and prothorax closely, finely, the elytra a little more coarsely, punctate; clothed with rather long, decumbent, pallid pubescence, the antennae closely set with short, stiff, bristly hairs. Head short, broad, narrowly, subangularly extended on each side behind the eyes, the latter extremely large, feebly emarginate, and separated by about half their width; antennae long, very stout, joint 2 short, 3 twice as long as 2, 3-10 subcylindrical, subequal in length, 11 large, about as long as 9 and 10 united, strongly acuminate. Prothorax convex, transverse, subquadrate, obliquely narrowed anteriorly, much narrower than the head, unimpressed. Elytra broad, rather short, parallel at the base, the oblique post-humeral depression deep. Legs long; posterior femora strongly clavate, the others stout; anterior tibiae much widened outwards, sinuous within, armed with a stout curved spur at the apex, and also with a short triangular tooth just before the tip beneath (fig. 7); tarsi rather stout, first joint of posterior pair feebly curved, more than half the length of the tibia.

Length 3, breadth  $1\frac{1}{5}$  mm.

*Hab.* ASSAM VALLEY (*Doherty*).

One male. In this insect the antennae are nearly as stout as in the American *X. forticornis* and its allies. The ferruginous prothorax and base of elytra, the black antennae, the strongly clavate posterior femora, and the peculiarly shaped anterior tibiae (♂) are its chief characters. The general coloration is not unlike that of the cosmopolitan *Anthicus floralis*.

5. *Xylophilus tavoyanus*, n. sp. (Plate I, fig. 8,  
anterior leg. ♂.)

♂. Moderately elongate, robust, shining; nigro-piceous, the palpi, base of elytra, tip of abdomen, anterior legs (the knees

excepted), base of intermediate femora, and intermediate tarsi, flavo-testaceous; head and prothorax closely, finely, the elytra more coarsely, punctate; clothed with long, fine, pallid pubescence. Head very large, short, narrowly, angularly extended on each side behind the eyes, the latter extremely large, deeply emarginate, and separated by about half their width; antennae long, moderately stout, joint 2 much shorter than 3, 3 very gradually decreasing in length, 10 transverse, 11 stout, longer than 9 and 10 united, strongly acuminate. Prothorax rather narrow, broader than long, subquadrate, convex, narrowed in front, unimpressed. Elytra a little wider than the head, comparatively short, subparallel at the base, the usual oblique depression long and deep (the space near the suture thus appearing strongly tumid). Legs long [the posterior pair wanting]; anterior and intermediate femora stout; anterior tibiae broadly, subangularly at the middle within, and produced into a curved tooth at the tip (fig. 8), the tarsus inserted a little before the apex.

Length  $2\frac{1}{2}$ , breadth  $\frac{9}{10}$  mm.

*Hab.* TENASSERIM, Tavoy (*Doherty*).

One male, now wanting the posterior legs, but nevertheless easily recognisable by the powerful, subangularly dilated anterior tibiae, the long, dark antennae, with elongate, stout, apical joint, the large head and eyes, and the abruptly flavous base of the elytra. *X. tavoyanus* is related to *X. pulvinatus*; but it is much smaller and narrower, the antennae are more slender, the prothorax is infusate, and the anterior tibiae ( $\delta$ ) are differently shaped.

#### 6. *Xylophilus perakensis*, n. sp.

$\delta$ . Oblong, broad, robust, shining; nigro-piceous, the humeri, the anterior femora, and the anterior tibiae and intermediate femora in part, ferruginous, the palpi and tarsi testaceous [the hind legs missing], the antennae black, with the base and tip reddish; densely, the elytra a little more coarsely, punctate; finely pubescent. Head short, broad, extended outwards on each side behind the eyes, the latter large, depressed, deeply emarginate, and separated by about half their own width; antennae stout, moderately long, joint 2 short, 3 longer, 3-10 gradually decreasing in length, 3-7 nearly as long as broad, 8-10 transverse, 11 stout, obliquely acuminate. Prothorax rather convex, large, transverse, a little narrower than the head, subquadrate, narrowed in front, unimpressed. Elytra considerably wider than the head, oblong, narrowing from a little below the base, with an oblique intra-humeral depression.

Legs stout [posterior pair wanting], the femora clavate; anterior tibiae short, moderately thickened, mucronate at the apex. Penis-sheath stout, acuminate.

Length  $2\frac{3}{4}$ , breadth 1 mm.

*Hab.* PERAK (*Doherty*).

One specimen. This insect is coloured like *X. axillaris*, from Assam, but it is more nearly related to *X. tavoyanus*, from Tenasserim, which has the entire base of the elytra testaceous, the legs and antennae longer and not so stout, and the anterior tibiae of the ♂ strongly dilated at the middle within. The posterior legs are unfortunately wanting in the unique types of these two insects; these legs doubtless have the femora strongly clavate. *X. axillaris*, known from a single ♀, has shorter and much more slender limbs, and it is scarcely likely to be the sexual complement of the Perak insect.

#### 7. *Xylophilus axillaris*, n. sp.

♀. Moderately elongate, broad, robust, shining; nigro-piceous. the palpi, humeri, anterior legs (the knees excepted), intermediate femora in part, and the intermediate and posterior tarsi testaceous; head and prothorax densely, finely, the elytra more coarsely, punctate; clothed with rather long, pallid pubescence. Head broad, short, narrowly, subangularly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their width; antennae short, rather stout, joint 2 slightly shorter than 3, 3-10 very gradually decreasing in length, 3-5 about as long as broad, 6-10 transverse, 11 short-ovate, acuminate. Prothorax transverse, subquadrate, narrowed in front, convex, obsolete canaliculate down the middle behind. Elytra broad, much wider than the head, rather short, subparallel in their basal half, without definite depression. Legs rather short, posterior femora a little thicker than the others, basal joint of posterior tarsi curved.

Length  $2\frac{1}{2}$ , breadth 1 mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One female, in poor condition. Not unlike *X. bryanti*, Pic, from Ceylon, differing from that species in its larger size, the stouter, nigro-piceous antennae, the unimpressed elytra, with the humeri only testaceous, and the less thickened posterior femora and tibiae. *X. scapularis*, Fairm. (re-named *fairmairei* by Pic), from Belgaum, may be an allied form.

8. *Xylophilus melanotus*, n. sp.

♀. Moderately elongate; broad, robust, shining; nigro-piceous, the mouth-parts, palpi, the anterior legs in great part, and the intermediate and posterior legs with the tarsi and the bases of the femora, testaceous or rufo-testaceous; head and prothorax closely, finely, the elytra a little more coarsely, punctate; clothed with long, fine, decumbent, cinereous pubescence. Head short, broad, narrowly, subangularly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae rather short, moderately stout, joint 2 short, 3 a little longer, 3-10 very gradually decreasing in length, 8-10 transverse, 11 acuminate-ovate. Prothorax convex, transversely-subquadrate, obliquely narrowed in front, narrower than the head, unimpressed. Elytra moderately long, much wider than the head, subparallel in their basal half, feebly, transversely depressed below the base. Legs long, the posterior pair with the femora stout, clavate, the tibiae rather broad, and the basal joint of the tarsi arcuate.

Length  $2\frac{1}{3}$ , breadth  $1\frac{1}{10}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One specimen. This insect approaches *X. arthriticus*, from the same locality, the male only of which is known, but differs from it, apart from the shorter antennae, in having the anterior legs almost entirely testaceous, the basal joint of the posterior tarsi strongly curved, and the elytra less coarsely punctate, without the deep oblique depression below the base. Compared with the allied *X. axillaris* (♀), also from the same locality, it is more elongate, the legs and antennae are longer, the posterior femora are more strongly clavate, the posterior tibiae are broader, and the elytra want the humeral spot.

9. *Xylophilus patkainus*, n. sp.

♂. Moderately elongate, narrow, robust, shining; piceous, the head black, the antennae ferruginous at the tip, the palpi and tarsi testaceous, the anterior femora and tibiae, and the intermediate femora at the base, rufo-piceous; closely, rather finely punctate, the punctures very little coarser on the elytra; clothed with moderately long, greyish pubescence. Head large, broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae stout, short, joint 2 shorter than 3, 3-7 subquadrate, about equal,

8-10 transverse, 11 stout, longer than 9 and 10 united, obliquely acuminate. Prothorax convex, narrow, nearly as long as broad, slightly rounded at the sides, unimpressed. Elytra a little wider than the head, rather short, gradually narrowing from just below the base, the oblique intra-humeral depression well-defined. Legs moderately long; anterior tibiae bowed inwards from about the middle, subangulate externally; posterior femora a little stouter than the others; posterior tibiae somewhat dilated, feebly rounded externally; basal joint of posterior tarsi feebly arcuate.

Length (with head extended) 2, breadth  $\frac{2}{3}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One male. Near *X. clavipes*, from Tenasserim, but with the legs and antennae much shorter and darker, the posterior femora not nearly so stout, the body piceous, the anterior tibiae bent in the ♂, etc. The dark body, short antennae, narrower and more finely punctured elytra, and less abruptly bent, non-mucronate anterior tibiae of the ♂, separate *X. patkainus* from *X. cribricollis* (= *mucronatus*), Pic, from Ceylon. *X. melanotus*, from the same locality, the ♀ only of which is known, is a much larger, broader, and more robust insect, with longer limbs, a shorter apical joint to the antennae, etc., and it cannot be the sexual complement of the present species. *X. patkainus* is also very like the Brazilian insect here identified as *X. obscuricolor*, Pic, which has differently formed antennae and stouter posterior femora.

#### 10. *Xylophilus meranganus*, n. sp.

Oblong, robust, convex, shining; ferruginous, the head black, the palpi, antennae, elytra, and legs (the partially infusate intermediate and posterior femora and tibiae excepted) testaceous; densely, the elytra rather coarsely, punctate; clothed with rather long, pallid hairs. Head short, broad, narrowly, subangularly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae short, stout, joint 2 short, 3 longer, 3-10 gradually decreasing in length, 3-6 about as long as broad, 7-10 transverse, 11 acuminate-ovate. Prothorax large, a little narrower than the head, transversely subquadrate, narrowed in front, unimpressed. Elytra rather short, convex, wider than the head, somewhat rounded at the sides, narrowing from the basal third, without definite impression on the disc. Legs comparatively short and stout; posterior

femora clavate, simple; basal joint of posterior tarsi feebly curved.

Length 2, breadth 1 mm. (♀?)

*Hab.* SUMATRA, Merang (*Doherty*).

One specimen. A robust, convex, somewhat oval insect, with short, stout limbs, a broad black head, and the prothorax, elytra, antennae, and tarsi ferruginous or testaceous, the prothorax and elytra without depression, the posterior femora clavate. This is the only representative of the genus from Sumatra in the British Museum collection, and it is apparently different from all the numerous species described from that island.

### 11. *Xylophilus latericius*, n. sp.

Oblong, robust, shining; rufo-testaceous, the eyes black, the posterior tibiae and the sides of the elytra slightly infuscate; densely punctate, the punctures on the elytra very little coarser than those on the prothorax; clothed with long, fine, pallid hairs. Head very broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by a little more than half their own width; antennae short, moderately stout, joint 3 slightly longer than 2, 3-10 gradually decreasing in length, 7-10 transverse, 11 rather stout, obliquely acuminate. Prothorax large, strongly transverse, a little narrower than the head, subquadrate, narrowed in front, obsolete canaliculate down the middle behind. Elytra broader than the head, moderately long, subparallel in their basal third, rounded at the apex, transversely depressed below the base. Legs rather stout, moderately long; posterior femora clavate, simple; posterior tibiae widened and compressed; basal joint of posterior tarsi curved.

Length 2½, breadth 1 mm. (♂?)

*Hab.* SIAM, Renong (*Doherty*).

One specimen, apparently a male. Near *X. ceylonicus*, from Kandy, Ceylon, and *X. lentus* and *X. matangensis*, from Borneo, all of which have the anterior tibiae more or less bent and mucronate in ♂. Larger and broader than the first-named, the antennae shorter and not so stout, the elytra more finely punctate. More elongate and broader than *X. lentus*, ♂, the legs and antennae not quite so stout, the prothorax broader, etc. Much larger and broader than *X. matangensis*, the antennae shorter and stouter,

the elytral punctuation not nearly so coarse. *X. erythroderus*, from Borneo, *X. acuminatus*, from Penang, and *X. meranganus*, from Sumatra, again, are allied forms, but they have the head black and differ in other respects.

### 12. *Xylophilus clavipes*, n. sp.

♂. Oblong, robust, shining; testaceous, the head, prothorax, and under surface reddish, the eyes black, the posterior femora and tibiae in great part piceous, the intermediate femora infuscate near the tip; head and prothorax closely, finely, the elytra more coarsely and diffusely, punctate; finely pubescent. Head short, broad, narrowly, subangularly extended on each side behind the eyes, the latter very large, deeply emarginate, and separated by less than half their own width; antennae rather stout, long, joint 2 much shorter than 3, 3-10 subcylindrical, about equal in length, 11 nearly as long as 9 and 10 united, acuminate-ovate. Prothorax rather convex, narrow, broader than long, quadrate, but little narrowed in front, unimpressed. Elytra comparatively short, a little wider than the head, narrowing from just below the base, broadly, obliquely depressed on the disc anteriorly, appearing subcostate from the humeri downward. Legs stout, moderately long; anterior tibiae feebly sinuate within, mucronate at the inner apical angle; posterior femora very stout, strongly clavate; posterior tibiae widening from a little below the base; basal joint of posterior tarsi feebly curved, stouter than the following joints.

Length 2, breadth  $\frac{1}{2}$  mm.

*Hab.* TENASSERIM, Tavoy (*Doherty*).

One male. More elongate than *X. ceylonicus*, Pic, ♂, the antennae much longer, with joints 3-10 oblongo-cylindric, the anterior tibiae more slender and without a long bent hook at the apex beneath, the prothorax less transverse. The legs longer and stouter, the posterior femora strongly clavate.

### 13. *Xylophilus trinotatus*, n. sp. (Plate I, fig. 9, ♀.)

♀. Short, broad, shining; piceous, the antennae, palpi, legs, prothorax, a large humeral spot on the elytra, and the apex of the latter broadly, testaceous; densely, finely, the elytra more coarsely, punctate; clothed with long, pallid pubescence. Head short, broad, narrowly, subangularly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae short, rather slender, joint 2 much

shorter than 3, 3-10 subcylindrical, gradually decreasing in length, 10 transverse, 11 acuminate-ovate. Prothorax strongly transverse, convex, very little narrower than the head, unimpressed. Elytra short, much broader than the head, somewhat rounded at the sides, rather convex, the post-basal depression wanting. Legs comparatively short, the posterior femora a little stouter than the others.

Length  $2\frac{1}{10}$ , breadth 1 mm.

*Hab.* TENASSERIM, Tavoy (*Doherty*).

One female, at first provisionally placed by me under *X. podagricus*, the male only of which is known; but the differences are much too great for these insects to be the sexual complements of the same species. *X. trinotatus* is not unlike the Palaearctic *X. neglectus*, Duval, except that it is larger and more robust, etc.

#### 14. *Xylophilus flavofasciatus*, n. sp.

♂. Oblong, rather convex, shining; piceous, the head (the eyes excepted) and prothorax ferruginous, the antennae and palpi, the elytra with a rather broad basal fascia and an indeterminate oval spot near the suture beyond the middle, and the legs (the posterior femora in part excepted), testaceous; densely, finely, the elytra rather coarsely, punctate, finely pubescent. Head convex, short, moderately broad, the eyes depressed, deeply emarginate, not reaching the base; antennae rather stout, subfiliform, joint 2 short, 3 and 4 a little longer, equal, 5-10 slightly shorter and wider, 10 transverse, 11 stout, as long as 9 and 10 united, acuminate-ovate. Prothorax transverse, rounded at the sides, rather convex, unimpressed. Elytra short, much wider than the head, somewhat rounded at the sides, the post-basal depression wanting. Legs comparatively short, rather stout; anterior tibiae armed with a minute triangular tooth on the inner edge about the middle; posterior femora stout, clavate, simple; posterior tibiae curved, rather broad; basal joint of posterior tarsi feebly curved.

Length  $1\frac{2}{3}$ , breadth  $\frac{3}{4}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One male, somewhat crushed. Smaller than *X. ceylonicus* and *X. nigronotatus*, Pic, and *X. clavipes*, Ch.; the elytra less parallel, piceous, and testaceo-maculate; the eyes rather small and depressed; the male with the anterior tibiae armed with a minute tooth at the middle, the posterior femora simply clavate, and the posterior tibiae curved.



15. *Xylophilus ehippiatus*, n. sp.

♂. Short, shining; testaceous, the head black, the elytra with a transverse mark at the base near the scutellum and a common interrupted median fascia (formed by a triangular patch at the sides and a broader subtriangular patch across the suture) piceous, the posterior femora and tibiae slightly infuscate; head and prothorax closely, finely, the elytra a little more coarsely, punctate; finely pubescent. Head short, broad, very narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and narrowly separated; antennae rather slender, joint 2 short, half the length of 3, 3 and 4 about equal, cylindrical [5-11 broken off]. Prothorax transversely subquadrate, obliquely narrowed in front, narrower than the head, with a faint, shallow, arcuate depression before the base. Elytra a little wider than the head, gradually narrowing from near the base, with a shallow, oblique, post-basal depression. Legs rather short; anterior tibiae slightly widened, simply arcuate, the intermediate pair feebly curved; posterior femora stout, with a slender, sharp tooth near the tip, and furnished with a narrow, setulose pad along their lower face.

Length (with head extended)  $1\frac{2}{3}$ , breadth  $\frac{3}{4}$  mm.

*Hab.* TENASSERIM, Tavoy (*Doherty*).

One male. Smaller and narrower than *X. diversiceps*, Pic, from Ceylon (the female only of which is known); the elytra less coarsely punctate, the dark basal markings not extending down the suture, and the common median fascia divided into two triangular patches on each elytron; the posterior femora very much stouter. Unless these insects were obtained at the same locality, it would be unsafe to treat them as the sexual complements of one species.

16. *Xylophilus rufinus*.

*Xylophilus rufinus*, Fairm., Ann. Soc. Ent. Belg. xl, p. 45 (1896) (part.).

♂. Oblong, shining; rufo-testaceous, the eyes black, the posterior femora slightly infuscate; the entire upper surface densely punctate, the punctures on the elytra rather coarse; finely pubescent. Head short, broad, the eyes small, not reaching the base, feebly emarginate; antennae subfiliform, moderately long, rather stout, joints 2 and 3 about equal, 4 longer than 3, 4-10 very gradually decreasing in length, 11 rather stout, acuminate-ovate. Prothorax not quite so wide as the head, short, transversely quadrate, abruptly, obliquely

narrowed in front. Elytra considerably wider than the head, oblong, without definite depression. Legs slender, moderately long; anterior tibiae curved, armed with a minute triangular tooth at about one-third from the apex, and mucronate at the inner apical angle; posterior femora clavate, stout; posterior tibiae straight; basal joint of posterior tarsi very slender, almost straight.

Length  $1\frac{2}{3}$ , breadth  $\frac{2}{3}$  mm.

*Hab.* INDIA, Belgaum (*Andrewes*).

Fairmaire appears to have confused three species under this name. Two co-types, ♂ ♀, lent me by Mr. Andrewes, cannot possibly be conspecific, and the ♂ mentioned by the author, and retained by him, with a dark head, larger and more approximate eyes, and stouter antennae, is clearly a third species. The general description, especially as regards the rather stout antennae, the densely punctured prothorax and elytra, and the infusate posterior femora, applies to the male before me, which can be taken as typical *X. rufinus*. An allied form, *X. chinensis*, Ch. (*infra*), occurs in China.

#### 17. *Xylophilus denticollis*, n. sp.

*Xylophilus rufinus*, Fairm., Ann. Soc. Ent. Belg. xl, p. 45 (1896) (part.).

Oblong, moderately shining; testaceous, the eyes black; sparsely, minutely, the elytra more closely and distinctly, punctate; finely pubescent. Head short, not very broad, very narrowly extended on each side behind the eyes, the latter moderately large, distant, entire; antennae rather short, joints 1 and 2 stout, 3 and 4 slender, equal, 3 longer than 2, 5-10 rapidly becoming shorter and wider, 9 and 10 transverse, 11 acuminate-ovate. Prothorax as wide as the head, strongly transverse, trapezoidal, abruptly, obliquely narrowed anteriorly, the anterior angles tumid and subdentiform, the disc with two shallow oblique foveae before the base. Elytra broad, nearly twice as wide as the prothorax, oblong, narrowing from about the basal third, the oblique post-basal depression rather deep, the humeri somewhat prominent. Legs slender, rather long, the posterior femora moderately incrassate, clavate, the tibiae narrow; basal joint of posterior tarsi very slender, long, almost straight.

Length 2, breadth 1 mm. (♀?).

*Hab.* INDIA, Belgaum (*Andrewes*).

One specimen. This species has the head and prothorax

equal in width; the prothorax short and trapezoidal, with the anterior angles subdentiform and the disc comparatively smooth; the elytra broad; the third and fourth joints of the antennae slender; and the body wholly testaceous, the eyes excepted. The antennae are very different from those of *X. rufinus*, being more like those of *X. orientalis*, Ch.\* The puncturing of the surface also is very much finer and more scattered than in *X. rufinus*, and the eyes are larger and entire.

18. *Xylophilus nilgiriensis*, n. sp. (Plate I, figs. 10, ♂;  
10a, anterior leg.)

♂. Short, depressed, opaque; rufo-testaceous or testaceous, the elytra slightly infuscate along the suture from a little below the base to near the tip, the eyes black; head and prothorax minutely, the elytra more distinctly, punctate; very finely sericeo-pubescent. Head short, broad, very narrowly extended on each side behind the eyes, the latter large, unemarginate, distant; antennae short, not very slender, joints 2 and 4 rather stout, subequal, 3 narrower and scarcely longer, 4-10 gradually becoming shorter, 8-10 transverse, 11 ovate. Prothorax transverse, trapezoidal, the anterior angles somewhat dentiform, the disc shallowly, obliquely bi-impressed before the base. Elytra wider than the head, narrowing from about the basal third, the post-basal depression oblique and rather broad. Legs very slender, long; anterior tibiae slightly curved; anterior tarsi with the basal joint much thickened, as broad as the tibiae (fig. 10a); posterior femora incrassate, much stouter than the others.

Length  $1\frac{1}{2}$ , breadth  $\frac{2}{3}$  mm.

*Hab.* INDIA, Nilgiri Hills (*H. L. Andrewes*).

Three males. A minute, delicate, pallid form, with finely punctate surface, unemarginate, widely separated eyes, long, slender legs, incrassate posterior femora, and a greatly thickened basal joint to the anterior tarsi in ♂, much as in many *Macratrīae*. The infuscation of the suture may be due to discoloration. This species bears some relationship to *X. scutatus*, Ch., from Borneo,† which is a much broader insect, with stouter posterior femora, a larger head, non-unicolorous antennae, etc.

\* Ann. and Mag. Nat. Hist. (8) xvi, p. 223.

† Ent. Mo. Mag. li, p. 284.

19. *Xylophilus brunneomaculatus*.

*Hylophilus brunneomaculatus*, Pic, L'Échange, xxiii, p. 182 (1907).

Moderately elongate, broad, attenuate posteriorly, shining; testaceous, the head in part or almost entirely piceous, the eyes black, the elytra with a large, brownish, indeterminate patch on the disc before the middle; head almost smooth, prothorax and elytra densely punctate, the punctures on the prothorax very fine, those on the elytra moderately coarse; finely pubescent. Head small, transverse, broadly, subangularly extended on each side behind the eyes, the latter small and feebly emarginate; antennae moderately long, very slender, thickened towards the apex, joint 2 about as long as 4, 3 and 5 more elongate, 5-10 becoming gradually wider, 10 about as broad as long, 11 longer and stouter, arcuato-acuminate. Prothorax nearly as wide as the head, transversely quadrate, the sides constricted behind the middle, tumid in front of this, and abruptly convergent in front, the disc with two deep oblique foveae before the base. Elytra rather long, somewhat inflated, more than twice the width of the prothorax, rapidly narrowed posteriorly, transversely depressed below the base. Legs slender, rather long; posterior femora thickened towards the tip.

Length  $2\frac{1}{3}$ - $2\frac{1}{2}$ , breadth  $1\frac{1}{10}$ - $1\frac{1}{3}$  mm. (♀?).

*Hab.* INDIA, Kasauli, Himalayas (*H. J. W. Barrow*, 21. vi. '05), Simla (vi. 1912, on *Mus decumanus*), Murree [type].

Two specimens from Kasauli and Simla respectively are perhaps referable to *X. brunneomaculatus*, Pic, the type of which was from Murree. There is, however, some doubt about the identification, and a description is given from the examples in the British Museum: the Murree insect is said to have the elytra more coarsely punctate at the base than at the apex, the prothorax longer than broad, and the abdomen black. *X. rosti*, Pic (1909), from Kulu, may also be an allied form, but it is described as having the prothorax "presque carré."

20. *Xylophilus linearis*, n. sp.

Elongate, narrow, shining; fuscous, the humeri and palpi testaceous, the antennae piceous with the tip ferruginous, the legs obscure testaceous; densely, minutely, the elytra a little more coarsely, punctate; closely, finely pubescent. Head short, convex, moderately broad, the eyes small, distant, feebly emarginate, not reaching

the base; antennae slender, widening outwards, joint 2 short, 3 longer and narrower, 4-10 gradually becoming shorter and wider, 9 and 10 transverse, 11 ovate, obliquely acuminate. Prothorax narrower than the head, broader than long, quadrate, the anterior angles dilated into a prominent obtuse tooth, the sides abruptly and obliquely convergent thence to the apex, the disc with a deep, transverse, arcuate impression before the base and a shallow transverse groove in front of this. Elytra long, much wider than the head, subparallel in their basal half, the post-basal depression oblique and deep. Legs very slender [intermediate and posterior pairs wanting].

Length 2, breadth  $\frac{1}{3}$  mm.

*Hab.* BURMA, Ruby Mines (*Doherty*).

One specimen, in a sufficiently good state of preservation for naming. The laterally dentate, uneven, subquadrate prothorax, the small eyes, and the long, subparallel elytra are characteristic. Two species of the genus (*robustior* and *nigricolor*, Pic) have been described from Burma, but they must be different from the present insect.

21. *Xylophilus barbicornis*, n. sp. (Plate I, fig. 11,  
antenna, ♂.)

♂. Elongate, narrow, depressed, dull (till denuded); obscure testaceous, the long apical joint of the antennae to near the tip, and a common, broad, post-median fascia on the elytra, fuscous, the eyes black, the tarsi flavous; the head and prothorax densely, finely, the elytra coarsely, punctate; finely pubescent. Head transverse, rather convex, narrowly extended on each side behind the eyes, the latter moderately large, separated by about their own width, and very feebly emarginate in front; antennae (fig. 11) moderately long, joints 1 and 2 much thickened, 2 short, 3-6 gradually decreasing in length, 3 obconic, narrower and much longer than 2, 7-10 a little wider and strongly transverse, 11 stout, greatly elongated, as long as 3-10 united, subcylindrical, acuminate at the tip, becoming thicker towards the base and apex, and closely set with stiff dark setae. Prothorax nearly as long as broad, narrow, with the sides constricted behind the middle, somewhat tumid in front of this, and obliquely convergent in front, the disc almost unimpressed. Elytra long, wider than the head, parallel in their basal half, with a broad, oblique, deep post-basal depression. Legs long; anterior tibiae armed, with a triangular tooth beyond the middle; anterior tarsi with the basal joint thickened; posterior femora a little thicker than the others, furnished with a narrow, densely

ciliate pad along their lower face; basal joint of posterior tarsi elongate, very slender, almost straight.

Length  $2\frac{1}{2}$ , breadth  $\frac{3}{4}$  mm.

*Hab.* INDIA, Nilgiri Hills (*H. L. Andrewes*).

One male. This remarkable insect, which might easily be mistaken for an Anthicid till the tarsal structure was examined, has the apical joint of the antennae stout and greatly elongated as in many Lagriids, this joint being probably normal in the female. It is a narrow, elongate, depressed, pallid form, with a broad, faint, darker post-median fascia on the elytra. The very long, curved, acuminate, penis-sheath is extruded in the type. *X. claviger*, Ch. (infra), from Siam, is a somewhat similar insect.

## 22. *Xylophilus glaucus*, n. sp.

♂. Moderately elongate, depressed, opaque (till denuded); nigropiceous, the head rufo-piceous, the mouth-parts, palpi, joints 1-3 and 11 of the antennae, the prothorax, a small humeral spot on the elytra, the anterior and intermediate legs (the slightly infusate outer halves of the intermediate femora and tibiae excepted), and the posterior tarsi, rufous or testaceous; densely, finely, the elytra a little more coarsely, punctate; the upper surface uniformly clothed with fine, sericeous, grey pubescence. Head short, moderately broad, extended on each side behind the eyes, the latter not very large, feebly emarginate, and separated by about their own width; antennae slender, comparatively short, joint 3 nearly twice as long as 2, 3-10 gradually decreasing in length, 4-10 subtriangular, 11 stout, acuminate-ovate. Prothorax transverse, scarcely narrower than the head, subtrapezoidal, abruptly, obliquely narrowed in front, the anterior angles somewhat dentiform, the disc arcuately impressed before the base. Elytra moderately long, subparallel, flattened, wider than the head, with a shallow, oblique, post-basal depression. Legs rather long, slender; posterior femora moderately incrassate, with a long, narrow, flavous, densely ciliate pad towards the apex beneath; basal joint of posterior tarsi feebly curved, barely half the length of the tibia.

Length  $2\frac{1}{10}$ , breadth  $\frac{4}{5}$  mm.

*Hab.* PERAK (*Doherty*).

One male. Less elongate and more depressed than *X. malaccanus*, Pic; the head smaller and darker; the antennae short; the prothorax scarcely sinuate at the

sides, the dorsal depressions shallow, the anterior one faintly indicated; the ♂-characters wholly different. The colour of the elytra is considerably modified by the close, fine, grey pubescence. The narrow, ciliate, flavous pad on the posterior femora (which is wholly wanting in the same sex of *X. malaccanus*) extends for about one-third their length.

### 23. *Xylophilus malaccanus*.

? *Hylophilus malaccanus*, Pic, Ann. Soc. Ent. Fr. 1911, p. 108.

♂. Elongate, subparallel, shining (when denuded); nigro-piceous, the head, prothorax, a large humeral spot on the elytra, and the femora and tibiae (the posterior pair in part excepted), rufous or rufo-testaceous, the palpi and tarsi testaceous, the antennae rufo-piceous, with joints 1, 2, and 11 testaceous; closely, finely, the elytra more coarsely, punctate; clothed with fine, grey, sericeous pubescence. Head short, broad, convex, considerably developed on each side behind the eyes, the latter moderately large, feebly emarginate, and separated by a little less than their own width; antennae long, rather slender, joint 2 short, 3 much longer, 3-10 subequal in length, subtriangular, 11 acuminate-ovate. Prothorax much narrower than the head, subquadrate, abruptly, obliquely narrowed in front, strongly constricted on each side behind the tumid anterior angles, the disc with a deep, transverse, arcuate fovea near the base and a transverse groove in front of it, the latter extending outward to the lateral constriction. Elytra long, subparallel, wider than the prothorax, somewhat convex, the post-basal depression deep. Legs long, not very slender; anterior tibiae thickened, feebly sinuate, slightly curved; basal joint of anterior tarsi elongated, stout; intermediate tibiae sinuate, somewhat curved; posterior femora moderately incrassate, distinctly curved, simple; posterior tibiae dilated in their outer half within; basal joint of posterior tarsi long, a little curved, more than half the length of the tibia.

Length  $2\frac{1}{2}$ , breadth  $\frac{1}{2}$  mm.

*Hab.* PERAK (*Doherty*).

The male described seems to be a variety of *X. malaccanus*, Pic (the type of which was found by Doherty at the same locality), with a ferruginous humeral patch. To judge from the description, the sinuate sides of the prothorax and the strong transverse depression on the anterior portion of the latter agree better with the present insect than with *X. glaucus*, which is from the same source.

The antennae are simply said to be "assez grêles," a definition fitting either insect. The type may be a female. *X. nilgiriensis* has a similar front foot in ♂.

24. *Xylophilus claviger*, n. sp. (Plate I, fig. 12, antenna, ♂.)

♂. Elongate, narrow, depressed, shining; obscure testaceous, the eyes black, the elytra gradually becoming infusate towards the sides from a little below the base; densely, finely, the elytra more coarsely, punctate; finely pubescent. Head convex, broad, short, very narrowly extended on each side behind the eyes, the latter large, feebly emarginate, subapproximate in front; antennae (fig. 12) rather short, not very slender, joints 2 and 4 short, subequal in length, 3 longer, 4-10 gradually decreasing in length, 8-10 transverse, 11 produced into a long, acuminate club, about as long as 6-10 united. Prothorax rather small, transverse, subquadrate, constricted behind the rather prominent anterior angles, the disc arcuately impressed near the base and transversely grooved in front of this, the groove extending outwards to the lateral constriction. Elytra a little wider than the head, moderately elongate, subparallel, transversely depressed below the base. Legs long, rather slender; anterior tibiae armed with a small tooth towards the apex within; anterior tarsi with the basal joint slightly thickened; posterior femora moderately incrassate, furnished with a narrow, flavous, densely ciliate pad beneath which extends nearly the whole length of the femur; basal joint of posterior tarsi slender, about half the length of the tibia.

Length 2, breadth  $\frac{3}{4}$  mm.

*Hab.* SIAM, Renong (*Doherty*).

One male. Near *X. glaucus*, Ch., ♂, from Perak, obscure testaceous in colour, the prothorax shaped as in *X. malaccanus*, Pic, the eyes large and subapproximate in front, the antennae with a very elongate apical joint, the anterior tibiae toothed, the ciliate pad on the posterior femora extending for nearly their whole length. *X. barbicornis*, Ch., from the Nilgiri Hills, is an allied form with a still longer, but much stouter apical joint to the antennae in ♂; but in the Indian insect the eyes are much smaller, the elytra are longer and coarsely punctate, and the prothoracic depressions are shallow.

25. *Xylophilus penicillatus*, n. sp. (Plate I, fig. 13, ♂.)

♂. Elongate, depressed, shining; nigro-piceous, the elytra with the humeral callus and an indistinct spot on the disc before the



apex rufescent, the palpi, tarsi, and anterior coxae testaceous, the antennae piceous, with the apical joint reddish; head and prothorax densely, finely, the elytra more coarsely, punctate; finely pubescent, the minute hairs on the elytral spots flavescent. Head comparatively small, considerably developed on each side behind the eyes, the latter moderately large, emarginate, and separated by about their own width; antennae rather slender, joint 2 short, 3 longer and narrower than 2, 4-10 subserrate, longer than broad, subequal, 4 larger than 3, 11 acuminate-ovate. Prothorax slightly broader than long, narrow, quadrate, obliquely narrowed in front, transversely grooved before the middle, and with an areuate excavation before the base. Elytra elongate, slightly narrowed anteriorly, at the middle about twice as wide as the prothorax, transversely depressed below the base. Legs [anterior pair missing] long, the tarsi slender; intermediate femora much widened towards the apex beneath (appearing sinuous as seen from behind); posterior femora moderately incrassate, and furnished with a dense, compressed brush of fulvous hairs beneath, the brush extending from about the basal third to near the tip; posterior tibiae slightly dilated on the inner side beyond the middle, appearing sinuous within; basal joint of posterior tarsi feebly curved.

Length 3, breadth 1 mm.

*Hab.* INDIA, Manipur (*Doherty*).

One male, in bad condition and wanting the anterior legs, but with such a remarkable brush to the posterior femur that there can be no difficulty in identifying the species. *X. penicillatus* is not unlike *X. planipennis*, Motsch., ♂, from Ceylon,\* but it has a much narrower head and prothorax, and differently formed legs.

#### 26. *Xylophilus rufonotatus*, n. sp.

♀. Elongate-oval, robust, opaque (till denuded); nigro-piceous, the mouth-parts, the antennae with joints 1, 2, and 11, and the elytra with an elongate-triangular patch on the outer part of the disc below the base (extending forward to the humeri) and a large, indeterminate, oblong space towards the apex (visible only in certain lights), rufous or obscure ferruginous, the palpi, knees, and tarsi testaceous; the entire upper surface densely, minutely punctate, thickly clothed with very fine ashy pubescence, the elytra with a common, broad, brown median fascia. Head short, the eyes convex, very large, occupying the whole of the sides of the head, emarginate, well separated; antennae moderately long, very stout, becoming

\* Cf. Ann. and Mag. Nat. Hist. (8) xvi. p. 217.

more slender towards the base, joint 2 short, 3 and 4 a little longer, 5 subtriangular, 6-10 broad, strongly transverse, 11 acuminate-ovate. Prothorax slightly broader than long, rather narrow, the sides arcuately converging anteriorly, the disc with an arcuate depression before the base. Elytra moderately long, much wider than the head, somewhat rounded at the sides, strongly, transversely depressed below the base. Legs moderately long; posterior femora feebly clavate; basal joint of posterior tarsi curved.

Length  $2\frac{1}{2}$ , breadth 1 mm.

*Hab.* PERAK (*Doherty*).

One specimen, in good condition. A robust, elongate-oval, nigro-piceous insect, with very stout, outwardly widened antennae, joints 6-10 of which are strongly transverse; the elytra rufo-maculate on the outer part of the disc anteriorly, and also variegated with cinereous and brown pubescence; the entire upper surface densely, minutely punctate; the knees and tarsi testaceous. In certain lights the cinereous pubescence on the elytra appears to be condensed into a triangular patch in the post-basal depression. An isolated form.

27. *Xylophilus furcatimanus*, n. sp. (Plate I, figs. 14, ♂; 14a, anterior tibia and tarsus.)

♂. Moderately elongate, opaque (till denuded); piceous, the antennae, palpi, legs, and apex of abdomen, and the elytra with an oblique, elongate humeral patch and a smaller patch on the disc at about one-third from the apex, testaceous; the upper surface very finely punctate and clothed with fine pruinose pubescence. Head broad, short, with a flattened, slightly concave, triangular prominence in the middle at the base (conspicuous when seen in profile), the eyes large, occupying the whole of the sides, distant, feebly emarginate; antennae long, joint 2 short, 3 nearly twice as long as 2, 4 a little shorter than 3 or 5, 5-10 subequal in length, subserrate, 11 acuminate-ovate. Prothorax transverse, large, convex, rounded-subquadrate, with a deep, transverse, bifoveate impression before the base. Elytra moderately long, somewhat rounded at the sides, at the base not much wider than the head, the disc obliquely depressed anteriorly. Legs moderately long, comparatively stout; anterior tibiae dilated outwards into a very broad, obliquely bifurcate, subtriangular plate, the tarsus inserted beneath the apical portion of the plate (fig. 14a); posterior femora a little stouter than the others; posterior tibiae rather broad; basal joint of posterior tarsi somewhat curved.

Length  $2\frac{1}{4}$ , breadth  $\frac{9}{10}$  mm.

*Hab.* TENASSERIM, Tavoy (*Doherty*).

One male. The extraordinary form of the anterior tibiae of this insect is unique, I believe, amongst the known *Xylophilids*. The basal impression of the prothorax is unusually deep, and bifoveate within. The dull, finely punctured surface, the quadrimaculate elytra, and the pruinose vestiture distinguish the present species from the allied Indian forms known to me. The head is shaped as in *X. rufonotatus*.

28. *Xylophilus andamanensis*, n. sp. (Plate I, fig. 15, ♂.)

Moderately elongate, shining (when denuded); testaceous or rufo-testaceous, the eyes black, the elytra with a common, broad, angulate fascia at about one-third from the base and a narrower one beyond the middle, the anterior one extending forwards along the suture and outer margin, piceous or nigro-piceous, the posterior femora infusate in one example; head and prothorax closely, finely, the elytra more coarsely, punctured; clothed with very fine sericeous pubescence. Head short, broad; eyes very large, feebly emarginate, occupying almost the whole of the sides of the head, and separated by about half their own width; antennae slender, moderately long, similar in the two sexes, joints 2 and 3 short, equal, 4 twice as long as 3, 4-10 obovate, subequal in length, 11 much stouter than 10, acuminate-ovate. Prothorax transverse, rather narrow, rounded at the sides anteriorly, the disc with a shallow transverse depression before the base. Elytra long, subparallel in their basal half, a little wider than the head, somewhat convex, flattened towards the base, without definite depression. Legs long, slender, the posterior femora a little stouter than the others, the basal joint of the posterior tarsi distinctly curved; anterior tibiae of ♂ curved towards the apex, and feebly mucronate at the inner apical angle.

Length  $2\frac{1}{4}$ - $2\frac{1}{2}$ , breadth 1 mm. (♂ ♀)

*Hab.* ANDAMAN ISLANDS (*Capt. Wimberley*).

One pair, found placed amongst the Anthicids in the Fry collection. Recognisable by its elongate shape, the angulato-bifasciate elytra, the rather slender, pallid antennae, with short second and third joints, the large eyes, the moderately thickened posterior femora, and the feebly curved anterior tibiae of the male. The female is larger than the male.

29. *Xylophilus curtus*, n. sp.

Short, shining (when denuded); brown, the head piceous, the antennae obscure testaceous, the palpi and legs testaceous; densely, finely punctate, finely pubescent. Head short, broad, the post-ocular portion extremely narrow; eyes large, occupying nearly the whole of the sides of the head, feebly emarginate, moderately distant; antennae extremely short, rather stout, widening a little outwards, joints 2 and 3 subequal in length, 4-10 transverse and gradually becoming wider, 11 stout, short-ovate. Prothorax transverse, not so wide as the head, obliquely narrowed in front, with a sinuous, transverse groove before the base. Elytra short, a little wider than the head, subparallel at the base, feebly transversely depressed below the base. Legs short, slender [posterior pair wanting].

Length  $1\frac{1}{2}$ , breadth  $\frac{2}{3}$  mm. (♀.)

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One specimen, somewhat crushed. A minute brown insect, with the antennae and legs paler and the head piceous, the antennae extremely short and comparatively stout, the eyes large, the elytra short and densely punctate. An isolated form.

30. *Xylophilus holosericeus*, n. sp.

Elongate-oval, robust, shining (when denuded); fusco-ferruginous, the head piceous, the legs ferruginous; densely, finely, the elytra more coarsely and diffusely, subuniformly punctate; clothed with a fine, greyish, sericeous pubescence. Head short, moderately broad, arcuately gibbose at the base (as seen from behind), very narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by rather more than half their own width; antennae moderately stout, joint 2 short, 3 nearly twice as long as 2, 3-8 subequal, 9 and 10 a little shorter and wider, 11 ovate, obliquely acuminate. Prothorax narrower than the head, slightly broader than long, rounded-subquadrate, moderately convex, unimpressed. Elytra long, much wider than the head, gradually widened to the middle and narrowed thence to the apex, the oblique intra-humeral depression moderately deep. Legs long; posterior femora very little thicker than the others, feebly, subangularly dilated at a little beyond the middle beneath.

Length (with head deflexed) 3, breadth  $1\frac{1}{4}$  mm. (♀?).

*Hab.* INDIA, Kangra Valley, Punjab, alt. 4500 ft. (*Dudgeon*).

One specimen, found in June 1899. Very like *X. armipes*, Fairm., ♀, from Belgaum; but with the head arcuately swollen in the middle at the base, the antennae not so stout, the prothoracic angles more obtuse, the elytra a little wider at the middle and closely, conspicuously punctate throughout, the punctures (as in *X. troglodytes* from Selangor) very little coarser at the base. *X. dentatifemur*, Pic, from Ceylon, the ♂ only of which is known, is not unlike *X. holosericeus*; but the latter is a much larger insect, with longer legs, broader elytra, etc.

31. *Xylophilus sellatus*, n. sp. (Plate II, figs. 16, 16a, ♂.)

♂. Moderately elongate, rather narrow, dull (till denuded); ferruginous, the head, a very broad, common, post-median fascia on the elytra (narrowing outwards and not quite reaching the margin), and the posterior femora (except at the base) black, the posterior tibiae slightly infusate; above closely, minutely, the elytra more sparsely, punctate; clothed with very fine, greyish, sericeous pubescence. Head large, arcuate at the base above (fig. 16a); eyes extremely large, occupying almost the whole of the sides of the head, feebly emarginate, distant; antennae setulose, long, slender, joint 2 short, 3 twice as long as 2, 3-10 gradually decreasing in length, obconic, 10 about as broad as long, 11 ovate, obliquely acuminate. Prothorax convex, narrow, oblongo-subquadrate, the sides slightly constricted at the middle. Elytra moderately long, a little wider than the head, parallel in their basal third, with a rather deep, post-basal depression. Legs long, slender; anterior tibiae feebly curved, sharply toothed at the inner apical angle above (the apex appearing bidentate as seen from in front); anterior tarsi with joint 1 elongate, stout; intermediate femora angulato-lamellate at the apex beneath; posterior femora a little stouter than the others, distinctly clavate; posterior tarsi very slender, the basal joint almost straight.

Length 2, breadth  $\frac{3}{4}$  mm.

*Hab.* INDIA, Nilgiri Hills (*H. L. Andrewes*).

One male, in very good condition. Near *X. palliditarsis*, Pic, from Ceylon; but differently coloured, the antennae less elongate, the basal joint of the anterior tarsi much thickened and the anterior tibiae sharply toothed at the tip above in ♂, the head not binodose at the base and the intermediate femora simply angulato-lamellate at the apex in this sex. A figure of the head of *X. palliditarsis*, ♂, is shown for comparison (Plate II, fig. 17).

32. *Xylophilus troglodytes*, n. sp. (Plate II, fig. 18, ♂.)

Elongate, rather convex, dull; nigro-piceous, the outer joints of the antennae and the basal portions of the femora ferruginous, the palpi and tarsi testaceous; closely, minutely, the elytra more sparsely and distinctly, punctate, the interspaces alutaceous throughout; clothed with very fine, sericeous, greyish pubescence, the upper surface appearing plumbeo-pruinose. Head moderately large, a little smaller in ♀, narrowly extended on each side behind the eyes, the latter very large in ♂, smaller in ♀, deeply emarginate, occupying nearly the whole of the sides of the head; antennae (♂) pilose, slender, filiform, extremely elongate, longer than the body, joint 2 short, 3 twice as long as 2, 4-10 nearly equal, 4 longer than 3, 11 strongly, obliquely acuminate, (♀) a little shorter and more slender; apical joint of maxillary palpi extremely broad, that of the labial palpi stout, securiform. Prothorax convex, about as long as broad, the sides obliquely convergent anteriorly and parallel thence to the base. Elytra elongate, subparallel in their basal half, in ♀ nearly twice as wide as the head and somewhat inflated, in ♂ a little narrower, flatter, and with a rather deep, transverse, post-basal depression. Beneath cinereo-pubescent, densely, minutely punctulate, with some scattered fine punctures intermixed; ventral segment 5 broadly depressed down the middle in ♂. Legs very elongate, slender; posterior femora subangularly dilated at about the apical third beneath, stouter in ♂ than in ♀; basal joint of posterior tarsi almost straight, very elongate in ♂.

Length  $2\frac{1}{2}$ -3, breadth 1 mm. (♂ ♀.)

*Hab.* MALAY PENINSULA, Batu Cave, Selangor (*H. N. Ridley*).

Three specimens, received by the British Museum in 1897, two in good condition and assumed to be ♂ and ♀, the third fragmentary and apparently ♂. They are labelled as having been found in total darkness, in the Batu Cave, a strange habitat for a *Xylophilid* and possibly accidental. This species is allied to the Indian *X. armipes* and *X. plumbeus*, but it is at once separable from them by the very elongate, slender, filiform antennae, the still longer legs, the more finely, evenly punctured elytra, etc. *X. troglodytes* bears a certain resemblance to the Scydmaenid genus *Mastigus*. These insects have an extremely broad apical joint to the maxillary palpus, and they may have to be removed from the present genus, with *X. palliditarsis*, Pic, and *X. sellatus*, Ch., and others.

33. *Xylophilus armipes*.

*Xylophilus armipes*, Fairm., Ann. Soc. Ent. Belg. xl, p. 44 (1896).

*Hab.* INDIA, Belgaum.

Fairmaire described this species from a pair from Belgaum. The type, male, retained by him, is said to have the anterior tibiae acutely angulate at the middle within; the female, lent me by Mr. Andrewes, has the anterior tibiae simple and the posterior femora hollowed at the apex beneath, so as to appear angulate at about one-third from the tip.

34. *Xylophilus plumbeus*, n. sp.

Elongate-obovate, dull; nigro-piceous, the elytral epipleura, the base and tip of the antennae, the coxae, the femora to near the apex, the tibiae in part, and the tarsi, ferruginous, the palpi testaceous; head and prothorax closely, minutely, the elytra more coarsely punctate, the punctures oblong, and becoming much finer and more scattered on the apical half, the interspaces alutaceous throughout; finely sericeo-pubescent. Head transverse, comparatively small, arcuate at the base above, narrowly, subangularly extended on each side behind the eyes, the latter moderately large, distant, and deeply emarginate; antennae long, slender, joint 2 short, 3 a little longer than 2, 4 longer than 3, 4-8 obovate, subequal, 9 and 10 slightly shorter, 11 ovate, obliquely acuminate. Prothorax gibbous, as long as broad, constricted and obliquely narrowed in front. Elytra much wider than the head, long, somewhat inflated, widest at the middle, flattened at the base. Legs long, slender, the posterior femora a little stouter than the others and feebly, subangularly dilated at about the apical third beneath; posterior tarsi comparatively short, the basal joint barely one-third the length of the tibia.

Length  $2\frac{1}{4}$ , breadth 1 mm. (??.)

*Hab.* INDIA, Kanara (*H. E. Andrewes*).

One specimen. Near *X. armipes*, Fairm., but smaller, the antennae slender, the head and prothorax narrower, the prothorax gibbous, the elytra more inflated and simply flattened at the base; the puncturing of the latter is very much finer on the apical half and the interspaces alutaceous in both species. The apical joint of the maxillary palpi is extremely broad.

35. *Xylophilus uncifer*, n. sp. (Plate II, fig. 19,  
intermediate leg, ♂.)

♂. Oblong, shining; rufo-testaceous, the eyes black, the head, and the posterior femora near the apex, piceous; finely, the elytra more sparsely and distinctly, punctate, the punctures on the latter becoming coarser towards the base; finely pubescent. Head broad, short, very narrowly, subangularly extended on each side behind the eyes, the latter large, rather deeply emarginate, distant; antennae long, not very slender, joint 2 shorter than 3, 3-10 obconic, subequal, 11 much longer than 10, ovate. Prothorax small, transverse, quadrate, obliquely narrowed in front, unimpressed. Elytra a little wider than the head, subparallel in their basal half, the oblique post-basal depression shallow. Legs rather short; intermediate femora armed with a sharp, slender, curved tooth near the apex beneath (fig. 19); posterior femora slightly thickened, feebly, subangularly widened at about the apical third beneath.

Length  $1\frac{1}{2}$ , breadth  $\frac{2}{3}$  mm.

*Hab.* INDIA, Bombay.

Two males, one in fragments, received by the Museum in 1879. A minute, oblong, rufo-testaceous form, with a very broad, infuscate head, long antennae, fusco-annulate, rather slender posterior femora, and the intermediate femora sharply toothed near the tip, as in *X. dentatifemur*, Pic, ♂, from Ceylon. *X. rufotestaceus* and *X. capitalis*, Pic, from Mahé, Malabar, may be allied forms; the descriptions, however, are useless for the purposes of identification. It is just possible that the ♂ with dark head and large eyes referred by Fairmaire to his *X. rufinus*, from Belgaum, may be conspecific with *X. uncifer* (?).

36. *Xylophilus tumidiceps*, n. sp.

Oblong, dull (till denuded); rufo-testaceous, darker beneath, the head and a broad space on the posterior femora before the apex black; densely, minutely, the elytra more sparsely, punctulate, the interspaces on the latter alutaceous; clothed with a very fine, greyish, sericeous pubescence. Head strongly deflexed, arcuato-gibbose at the base (as seen from behind); eyes very large, occupying nearly the whole of the sides of the head, feebly emarginate, somewhat distant; antennae slender, moderately long, joints 2 and 3 rather short, subequal in length, 2 stouter than 3, 4 longer, 4-10 very gradually becoming wider, subequal in length,



10 about as broad as long, 11 acuminate-ovate, rather long. Prothorax narrow, nearly as long as broad, quadrate, unimpressed. Elytra oblong-oval, much wider than the head, faintly, transversely depressed below the base. Legs very slender, long, the posterior femora moderately thickened.

Length  $1\frac{3}{8}$ , breadth  $\frac{3}{4}$  mm. (♀.)

*Hab.* INDIA, Sarda [Surda], Bengal (*F. W. Champion*).

One specimen, recently received from one of my sons. A graceful little insect, rufo-testaceous in colour, with the head and an annulus on the posterior femora black, the fine silky vestiture hiding the sculpture, the head transversely gibbose in the middle at the base, the antennae slender, with the last three joints perceptibly wider than those preceding and forming a sort of loose club, the legs long and very slender, the posterior femora not much thickened. The head, which is formed as in the female of *X. palliditarsis*, Pic, from Ceylon, is so strongly deflexed that I have not ventured to raise it.

### 37. *Xylophilus tortipes*, n. sp.

♂. Moderately elongate, robust, shining; nigro-piceous, paler beneath, the head (the eyes excepted) rufous, the palpi, a transverse patch at the base of each elytron (nearly reaching the suture), anterior legs, and intermediate and posterior tarsi, testaceous, the antennae black, with the tip red; the entire upper surface densely, finely punctate, the punctures on the elytra a little coarser; finely cinereo-pubescent. Head comparatively small, a little broader than long, rather broadly developed on each side behind the eyes, the latter moderately large, emarginate, separated by about half their own width; antennae rather stout, moderately long, joint 3 very small, not longer than 2, 4-10 subequal, about as long as broad, 11 obliquely acuminate. Prothorax narrow, nearly as long as broad, subquadrate, obliquely narrowed in front, the disc with a deep, arcuate depression before the base. Elytra broad, about twice as wide as the head, rather short, subparallel at the base, the post-basal depression deep, transverse. Legs long; anterior tibiae feebly sinuate within, distinctly mucronate at the inner apical angle; posterior femora moderately clavate, simple; posterior tibiae strongly sinuate, dilated on the inner side from before the middle to the apex.

Length  $2\frac{1}{10}$ , breadth (elytra) 1 mm.

*Hab.* SIAM, Renong (*Doherty*).

One male. This insect has the elytra coloured and shaped as in *X. bryanti*, Pic, from Ceylon, but the head and prothorax are narrow and rufous in colour; the eyes are smaller and do not nearly reach the base of the head; the antennae are black, and stouter, and have a minute third joint, as in *X. subcrassicornis*, Pic, which is also from Ceylon. The very differently coloured *X. andrewesi*, from the Nilgiri Hills, has similar antennae, but in that species the head is broader, the prothorax shorter, the elytra coarsely punctate, etc.

### 38. *Xylophilus andrewesi*, n. sp.

Moderately elongate, robust, shining; nigro-piceous, the antennae at the tip and a transverse post-humeral patch on the elytra ferruginous, the tarsi and palpi, the anterior and intermediate femora and coxae, and the tibiae at their base, testaceous; the head and prothorax densely, finely, the elytra more coarsely and diffusely, punctate; closely, finely pubescent. Head rather small, greatly developed behind the eyes, the latter small, feebly emarginate, distant; antennae rather short, joints 2 and 3 short, small, 4-10 longer, stouter, subtriangular, about as broad as long, 11 acuminate-ovate. Prothorax narrower than the head, broader than long, quadrate, the sides abruptly, obliquely convergent in front, the disc with two shallow confluent foveae before the base. Elytra moderately long, more than twice the width of the prothorax, subparallel in their basal half, with a deep, oblique, post-humeral depression. Legs long; posterior femora moderately incrassate; posterior tibiae somewhat widened.

Length  $2\frac{1}{5}$ , breadth (elytra) 1 mm. (♀?).

*Hab.* INDIA, Nilgiri Hills (*H. L. Andrewes*).

One specimen. Recognisable by the relatively narrow head and prothorax, the broad, subparallel, rather long, faintly rufo-maculate elytra, the small third joint of the antennae, and the comparatively small eyes, the head being developed behind them much as in *X. subcrassicornis*, Pic. *X. andrewesi* approaches *X. taprobanus*, Ch., from Ceylon, from which it differs in the shorter antennae, the narrower prothorax, the testaceous intermediate femora, etc. The stouter antennae, longer legs, more elongate, differently coloured elytra, etc., separate the present species from *X. subcrassicornis*.

39. *Xylophilus parvicollis*, n. sp.

♂. Moderately elongate, depressed, shining; piceous, the head (the eyes excepted), prothorax, and an indeterminate, short, curved streak on the elytra extending from the humeri to the post-basal depression, ferruginous; antennae black, with joints 1-3 testaceous and the tip ferruginous; anterior and intermediate legs (except the tibiae of the intermediate pair in part), and the outer half of the posterior tarsi, testaceous, the rest of the posterior pair piceous; densely, finely, the elytra more coarsely, punctate; closely, finely pubescent. Head convex, moderately broad, rounded at the sides behind, the eyes rather small, convex, distant from the base, feebly emarginate, and separated by nearly their own width; antennae moderately long, rather stout, joints 2 and 3 more slender, 3 small, not longer than 2, 4-10 rapidly decreasing in length, 4 longer than broad, 5-8 about as broad as long, 4-6 distinctly wider than those following, 9 and 10 transverse, 11 acuminate-ovate. Prothorax small, broader than long, quadrate, narrowed in front, transversely grooved before the base. Elytra moderately long, much wider than the head, subparallel, deeply, transversely depressed below the base. Legs long, slender; posterior femora moderately thickened, angularly dilated at a little beyond the middle beneath.

Length  $2\frac{1}{10}$ , breadth  $\frac{4}{5}$  mm.

*Hab.* ASSAM, Patkai Mts. (*Doherty*).

One specimen, assumed to be a male. The rather long head, small, quadrate prothorax, broad, subparallel, depressed elytra, and peculiarly formed antennae give this insect a distinctive facies. The three basal joints of the latter are clear testaceous and rather slender, and the three infusate joints following are slightly stouter than 7-10. *X. dohertyi*, Pic, from Perak, seems to have similarly formed antennae, but differs in colour, etc. Allied forms are before me from Tenasserim and Siam. They have the general appearance of Anthicids.

40. *Xylophilus siamensis*, n. sp.

♂. Elongate, depressed, shining; ferruginous, the elytra nigropiceous, with the basal third testaceous, the antennae black, reddish at the base and tip, the legs testaceous, the intermediate and posterior tibiae infusate in their outer half; closely, finely, the elytra more coarsely, punctate; finely pubescent. Head transverse, rounded at the sides behind the eyes, the latter moderately large,

deeply emarginate, not reaching the base of the head, and well separated; antennae very long, joints 1-3 rather slender, 3 minute, smaller than 2, 4-11 moderately stout, 4 longer than 2 and 3 united, 4-10 obconic, gradually decreasing in length, 11 obliquely acuminate. Prothorax small, a little broader than long, subquadrate, obliquely narrowed in front, the disc with a transverse depression before the base. Elytra flattened, moderately long, wider than the head, subparallel, blunt at the tip, with an oblique post-basal depression. Legs long; anterior tibiae feebly curved, mucronate at the inner apical angle; posterior femora feebly curved, moderately incrassate, simple.

Length  $1\frac{9}{10}$ -2, breadth  $\frac{2}{3}$  mm.

*Hab.* SIAM, Renong (*Doherty*).

Two males—one immature and almost wholly testaceous (the posterior infuscation of the elytra, however, is still visible), the other, from which the description is taken, apparently mature. The very long antennae in ♂, with minute third joint and the small prothorax, bring this species near *X. melanosoma* from Borneo\* and *X. parvicollis* from Tenasserim. Compared with the former, the antennae are less serrate, the eyes smaller, the elytra less rounded at the tip and flatter, the body differently coloured, etc. *X. parvicollis*, ♂, has shorter antennae, a longer head, more prominent eyes, differently coloured elytra, angularly dilated posterior femora, etc.

#### 41. *Xylophilus dohertyi*.

*Hylophilus dohertyi*, Pic, Bull. Soc. Ent. Fr. 1911, p. 109.

Oblong, somewhat depressed, shining (when denuded); rufotestaceous, the elytra with a common, indeterminate, broad, dark brown median fascia, the posterior femora and joints 4-10 of the antennae slightly infuscate, the eyes black; densely, finely, the elytra a little more coarsely, punctate; finely pubescent. Head moderately large, narrowed and considerably developed on each side behind the eyes, the latter rather large, emarginate, and separated by less than their own width; antennae moderately long, joints 2 and 3 narrower than those following, these latter rather stout, 3 very small, shorter than 2, 4-9 about as long as broad, 10 transverse, 11 ovate. Prothorax much narrower than the head, slightly broader than long, subtrapezoidal, abruptly, obliquely narrowed in front, the anterior angles somewhat tumid, the disc

\* Ent. Mo. Mag. li, p. 286.

transversely depressed before the base. Elytra oblong, wider than the head, subparallel in their basal half, transversely depressed below the base. Legs rather long, slender; anterior tibiae feebly curved, distinctly sinuate within; posterior femora moderately thickened, hollowed for some distance before the apex, appearing subangulate beneath.

Length 2, breadth  $\frac{3}{4}$  mm. ( $\sigma$ ?).

*Hab.* PERAK (*Doherty*).

One rather immature specimen. The specimen described, to judge from the description, may be a variety of *X. dohertyi*, Pic, the type of which was found by Doherty at the same locality. The latter is said to have long, stout, black antennae, with the three basal joints slender and testaceous in colour (as in the allied *X. parvicollis*, Ch., from Assam), the elytra with more than the posterior half nigro-piceous, etc.

42. *Xylophilus annulicornis*, n. sp. (Plate II, fig. 20,  $\sigma$ .)

$\sigma$ . Short, robust, shining (when denuded); black, the head (the eyes excepted), the tip of the antennae and the basal margin of the prothorax rufous, the palpi, third antennal joint, anterior legs, intermediate and posterior tarsi, and a common, transverse, post-basal fascia in the elytra (extending forwards along the suture and on each side curving round to the shoulder), testaceous or flavous; the intermediate and posterior femora and tibiae nigro-piceous, testaceous or ferruginous at the base; the entire upper surface densely punctate, the punctures on the elytra rather coarse; finely cinereo-pubescent. Head somewhat oval, convex, the eyes small, prominent, distant from the base, feebly emarginate; antennae moderately stout, rather long, joint 3 small, scarcely longer than 2, 3-10 stouter and longer, 3-9 about as broad as long, 10 transverse, 11 rather stout, acuminate-ovate. Prothorax narrow, broader than long, subquadrate, narrowed in front, obsoletely sulcate down the middle. Elytra short, convex, very broad, somewhat rounded at the sides, faintly, transversely depressed below the base. Legs rather long, slender; anterior tibiae straight, armed with a minute tooth on the inner edge at about one-third from the tip; posterior femora moderately incrassate, simple.

Length (with head extended) 2. breadth (elytra)  $\frac{9}{10}$  mm.

*Hab.* TENASSERIM, TAVOY (*Doherty*).

One male. This insect is so like *X. laticornis*, Pic, from Ceylon and Mergui, Tenasserim, the  $\text{\textcircled{f}}$  only of which is

known to me, that it is not impossible it may prove to belong to that species. The differences, however, seem too great to be simply sexual, and there are other more nearly allied forms in Borneo and Java with similarly flavo-annulate antennae, these organs being broader and with joints 6-10 strongly transverse in *X. laticornis*, ♀.

#### 43. *Xylophilus fusconotatus*, n. sp.

Short, broad, shining (when denuded); nigro-piceous, the margins of the prothorax, the base of the elytra narrowly, the apex of the latter indeterminately, and joints 1, 2 and 11 of the antennae, ferruginous or reddish, the palpi, tarsi, anterior femora, intermediate femora in part, and all the tibiae at base, testaceous; closely, finely punctate, thickly clothed with fine, cinereous and fuscous pubescence, the latter condensed on the elytra into a common, broad, angulate, post-median fascia and a spot on the disc below the base. Head very broad, short; eyes extremely large, occupying nearly the whole of the sides of the head, feebly emarginate, separated by rather more than half their own width; antennae very stout, joints 2 and 3 equal in length, short, much narrower than 4, 4-10 broad, strongly transverse, closely articulated, 11 acuminate-ovate, not wider than 10. Prothorax transverse, small, the sides parallel at the base and abruptly convergent anteriorly, the disc bifoveate posteriorly. Elytra short, broad, slightly rounded at the sides, feebly transversely depressed below the base. Legs short, rather slender, the tibiae straight, the posterior femora very stout, areuate in front, clavate.

Length  $1\frac{2}{3}$ , breadth  $\frac{7}{8}$  mm. (♀?)

*Hab.* INDIA, Sarda [Surda], Bengal (*F. W. Champion*).

One specimen in very fresh condition, received last year from one of my sons. It was captured, I believe, on the wing towards sunset. This insect bears some resemblance to *X. laticornis*, Pic, from Ceylon; but the antennae are still stouter, the head is shorter and much broader, the eyes are very large, the elytra are finely punctate and differently marked, the posterior femora are strongly clavate, etc. The general shape of the body is very like that of the Australian *X. albonotatus*, Ch. (1895),\* which, however, is a much smaller insect.

\* Nec *X. albonotatus*, Pic, from Perak (1913), renamed by the author *griseonotatus* in April 1916.

44. *Xylophilus megalocephalus*, n. sp. (Plate II, fig. 21, ♂.)

♂. Short, broad, robust, shining (when denuded); nigro-piceous, the prothorax obscurely rufescent, the mouth-parts, a small spot on the shoulder and another on the disc of the elytra towards the apex, the anterior and intermediate legs (except the tibiae in part), the base of the posterior tibiae, and the posterior tarsi, ferruginous or testaceous, the antennae obscure ferruginous, paler at the base; densely, finely, the elytra rather coarsely, punctate; finely cinereo-pubescent (the pubescence on the elytra apparently darker or denuded in places, giving them a variegate appearance). Head extremely large, transverse; eyes very large, nearly reaching the base of the head, feebly emarginate, separated by about half their own width; antennae rather short, comparatively stout, joint 3 not longer than 2, 4 stouter than 3, 4-10 gradually decreasing in length, 4-8 about as long as broad, 9 and 10 transverse, 11 acuminate-ovate. Prothorax short, small, subquadrate, abruptly, obliquely narrowed anteriorly, the anterior angles prominent, the disc feebly, confluently bifoveate before the base. Elytra short, broad, rather convex, a little wider than the head, parallel at the base, the post-basal depression transverse, shallow. Legs short, rather slender; posterior femora very stout, strongly clavate, arcuately swollen in front; posterior tibiae straight, more than twice the length of the basal joint of the tarsus.

Length (with head extended)  $1\frac{2}{5}$ , breadth  $\frac{2}{3}$  mm.

*Hab.* LARAT (*F. Muir*).

One specimen. A minute, broad, robust form, with an extremely large head, a small prothorax, and stout antennae, the posterior femora greatly swollen in ♂. The elytral pubescence is perhaps somewhat abraded. Larat is an island to the south of Timor Laut.

45. *Xylophilus bigeminatus*, n. sp. (Plate II, fig. 22.)

Oblong, broad, dull, the elytra shining (when denuded); head black, antennae piceous, with joints 1-3 and 11 ferruginous, prothorax rufous; elytra brownish-testaceous, each with two oblong, coalescent patches just beyond the middle of the disc (together forming a common, broad, interrupted fascia), a faint subapical fascia, and a small bare spot below the base, fuscous or nigro-fuscous; legs (the nigro-piceous posterior femora and infusate posterior tibiae excepted) testaceous, the under surface fusco-ferruginous; densely, finely, the elytra more coarsely, punctate; variegated with fine greyish and brown pubescence. Head short, moderately

large, very narrowly extended on each side behind the eyes, the latter extremely large, emarginate, and separated by rather more than half their own width; antennae comparatively short, moderately stout, joints 2 and 3 short, subequal in length, 4 subtriangular, about as long as broad, 8-10 strongly transverse, 11 acuminate-ovate. Prothorax much narrower than the head, transverse, subquadrate, abruptly, obliquely narrowed in front, bifoveate before the base. Elytra broad, comparatively short, very much wider than the head, rather convex, somewhat rounded at the sides, transversely depressed below the base. Legs short, slender, the posterior femora stout and strongly clavate; basal joint of posterior tarsi less than half the length of the tibia, almost straight.

Length 2, breadth 1 mm. (♀?).

*Hab.* SIAM, Renong (*Doherty*: type); CEYLON (*Thwaites*, in *Mus. Oxon.*).

One specimen from each locality, apparently belonging to the same species, the Ceylon example having a smaller prothorax and slightly stouter antennae. Recognisable by the rather short, broad, interruptedly fusco-fasciate elytra, the black head, rufous prothorax, very large eyes, short legs, and stout antennae. *X. bigeminatus* is related to the Palearctic *X. populneus*, Creutz., the type of *Xylophilus*, Latr., differing from that insect in its less elongate shape, shorter legs, larger eyes, etc. The Ceylon specimen is figured, the type being somewhat abraded. An unnamed, similarly coloured form from Hong Kong, with longer antennae, smaller eyes, etc., has been sent me by Commander Walker: it is too imperfect for description. *X. fasciolatus*, Mars., from Java, seems to be not unlike the present species.

#### *Chinese Species.*

#### 46. *Xylophilus pectinatus*, n. sp. (Plate II, fig. 23, posterior leg, ♂.)

♂. Oblong, narrow, shining; testaceous, the head nigro-piceous, the posterior femora slightly infuscate; head sparsely, the prothorax densely, finely, and the elytra somewhat coarsely, punctate; clothed with long, fine, pallid hairs. Head short, broad, very narrowly extended on each side behind the eyes, the latter extremely large, subcontiguous in front, and deeply emarginate; antennae rather long, stout, joint 2 short, much shorter than 3, 3-10 very



gradually decreasing in length, 3-7 subcylindrical, 8-10 about as broad as long, 11 nearly as long as 9 and 10 united, strongly, obliquely acuminate. Prothorax convex, narrower than the head, the sides gradually converging from the rather prominent hind angles, the disc unimpressed. Elytra oblong, wider than the head, very gradually narrowed from a little below the base, and with an almost obsolete, oblique, intra-humeral depression. Legs long; anterior and intermediate tibiae rounded externally, bowed inwards from about the middle, appearing sinuous within, the anterior pair bisetose at the tip; posterior femora stout (fig. 23), curved, set with a double row of stiff setae along their flattened lower face, and armed with a sharp tooth at the upper apical angle; basal joint of intermediate and posterior tarsi rather stout, densely pubescent beneath.

Length  $1\frac{3}{4}$ , breadth  $\frac{3}{4}$  mm.

*Hab.* CHINA, Hong Kong (*J. J. Walker*).

Described from a single male sent me in 1893. A rather worn, imperfect example of the same sex, more robust than the type, captured in Nov. 1853, is contained in the British Museum collection: this insect is labelled "China, Bowring." A small oblong, pallid form, with a comparatively smooth, nigro-piceous head, stout, subcylindrical antennae, bowed anterior and intermediate tibiae, and a comb-like armature to the stout posterior femora, in the ♂. *X. pectinatus* is related to *X. nigro-notatus*, Pic, from Ceylon, the ♂ of which has somewhat similarly armed posterior femora, differing from it in the shorter antennae, the much smoother, shining, blackish head, the immaculate elytra, the form of the legs, etc.

47. *Xylophilus spinimanus*, n. sp. (Plate II. fig. 24,  
anterior leg. ♂.)

Oblong, shining, testaceous, the eyes black; densely, finely, the elytra more coarsely, punctate, clothed with rather long pallid hairs. Head short, broad, very narrowly extended on each side behind the eyes, the latter large, emarginate, more approximate in ♂ than in ♀; antennae moderately long, slightly shorter in ♀, rather stout, joint 2 very little shorter than 3, 3-10 subcylindrical, gradually decreasing in length, 8-10 transverse in ♀, 11 as long as 9 and 10 united, strongly, obliquely acuminate. Prothorax transverse, subquadrate, narrower than the head, obsoletey canaliculate behind. Elytra oblong, subparallel, very little wider than the

head in ♂, with a long, oblique, intra-humeral depression. Legs long; anterior tibiae (fig. 24) compressed, somewhat widened, slightly curved outwards, and armed at the outer apical angle with a long, stout, curved, outwardly projecting spur, which reaches as far as the apex of the first tarsal joint; posterior femora strongly clavate, arcuate inflated in front; posterior tibiae compressed, rather stout, almost straight; basal joint of posterior tarsi curved.

Length  $1\frac{2}{3}$ – $1\frac{4}{5}$ , breadth  $\frac{2}{3}$ – $\frac{4}{5}$  mm. (♂♀.)

*Hab.* CHINA, Hong Kong (*Mus. Brit.*).

One male and two females, captured at various dates between 1852 and 1854. The male is extremely like *X. ceylonicus*, Pic, from Kandy, but it has the elytra subparallel, the antennae not so stout, the anterior tibiae less widened and with the long apical spur projecting straight outwards as in *X. cylindricornis* (supra), instead of being abruptly bent inwards from near the base as in *X. ceylonicus*,\* and the posterior femora more inflated on the anterior aspect. The females have the elytra much less narrowed posteriorly than in the specimen of the same sex doubtfully referred to *X. ceylonicus* by Pic. Compared with the similarly-coloured *X. pectinatus*, the male has the eyes less approximate, the second antennal joint longer, the prothorax subquadrate, and the legs very differently formed.

#### 48. *Xylophilus parvidens*, n. sp.

♂. Moderately elongate, shining, finely pubescent, rufo-testaceous, the eyes black; densely, finely, the elytra more coarsely, punctate. Head transverse, scarcely wider than the prothorax, extended on each side behind the eyes, the latter rather small, deeply emarginate; antennae slender, moderately long, joints 2 and 3 subequal in length, 4 and 5 a little longer and stouter [6–11 broken off]. Prothorax rather convex, transversely subquadrate, abruptly narrowed in front, the disc obsoletely, transversely depressed before the base. Elytra much wider than the head and prothorax, moderately long, somewhat convex, slightly rounded at the sides, transversely flattened below the base. Legs long, slender; anterior tibiae curved inwards at the apex, armed with a small triangular tooth on the inner side beyond the middle, and mucronate at the

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\* Cf. Ann. and Mag. Nat. Hist. (8) xvi, p. 222.

inner apical angle; posterior femora compressed, strongly clavate; basal joint of posterior tarsi almost straight.

Length 2, breadth  $\frac{2}{3}$  mm.

*Hab.* CHINA, near Entrance Island, Chusan Archipelago (*J. J. Walker*).

One male, sent to the British Museum in 1893. A rufo-testaceous form, with comparatively small eyes, slender antennae, with small third joint, rather convex, oblong elytra, clavate posterior femora, and peculiarly armed anterior tibiae in ♂. *X. parvidens* might easily be mistaken for an *Anthicus*, if the tarsi and ventral surface were not examined. A broken ♀ from the Chusan Islands, sent me by the same collector, may belong here; but it has the head less transverse and the posterior femora infuscate to near the apex.

#### 49. *Xylophilus chinensis*, n. sp.

Oblong, shining (when denuded), finely pubescent; ferruginous, the elytra, joints 1-4 of the antennae, and the legs (the basally infuscate posterior femora excepted) testaceous, the rest of the antennae slightly infuscate; densely, finely, the elytra a little more coarsely, punctate. Head short, broad, subangularly extended on each side behind the eyes, the latter small, deeply emarginate; antennae slender, moderately long, joint 3 small, narrow, scarcely so long as 2, 4-10 very gradually decreasing in length, 10 transverse, 11 acuminate-ovate. Prothorax nearly as wide as the head, transversely quadrate, abruptly narrowed in front, with a faint transverse depression before the base, the anterior angles tumid and subdentiform. Elytra oblong, broad, much wider than the head, slightly rounded at the sides, flattened on the disc below the base. Legs long, slender; posterior femora stout, clavate; posterior tibiae straight.

Length  $1\frac{4}{5}$ , breadth  $\frac{7}{8}$  mm. (♀?).

*Hab.* CHINA (*Mus. Brit., ex coll. Bowring*).

One specimen, acquired in 1863. This insect is very like *X. rufinus*, Fairm., from Belgaum (as here restricted), differing from it in the broader head, the sides of which are subparallel behind the eyes, the more slender, outwardly infuscate antennae, and the sharper anterior angles of the prothorax, the head and prothorax, too, are more densely punctate. The broad head also separates *X. chinensis* from *X. parvidens*.

50. *Xylophilus quadratipennis*, n. sp.

♂. Oblong, depressed, dull, finely pubescent; nigro-piceous, the mouth-parts, front of the head, basal and apical margins of the prothorax, tarsi, and anterior and intermediate femora and tibiae in great part, testaceous; the elytra testaceous, with a broad, transverse, blackish-brown subapical fascia, not reaching the suture and extending forwards on the disc and at the sides to near the base; the antennae piceous, with joints 1, 2, and 11 ferruginous; the entire upper surface densely, finely punctate. Head very large, broad; eyes extremely large, narrowly separated, deeply emarginate, and occupying the whole of the sides of the head; antennae long, very stout, joint 2 short, 3 smaller than 2, 4-10 much thickened, gradually decreasing in length, 4-7 about as long as broad, 8-10 transverse, 11 ovate. Prothorax small, short, subquadrate, abruptly narrowed in front, with a deep, transverse depression before the base. Elytra broad, flattened, oblongo-subquadrate, the oblique intra-humeral depression deep and extending downwards to the middle. Legs rather short, slender; posterior femora stout, strongly clavate.

Length (with head extended)  $1\frac{1}{3}$ , breadth  $\frac{4}{5}$  mm.

*Hab.* CHINA (*Mus. Brit., ex coll. Bowring*).

One specimen, received in 1863. It is assumed to be a male, on account of the greatly developed head, subapproximate eyes, and the very stout, long antennae. Amongst the species described in the present paper, *X. quadratipennis* comes nearest *X. megaloccephalus*, from Larat, which has very differently formed elytra and antennae. The Japanese *X. gibbulus*, Mars., is not unlike *X. quadratipennis*, the latter having much longer and stouter antennae, a much smaller prothorax, subparallel elytra, etc.

*Australasian Species.*51. *Xylophilus abnormis*.

*Anthicus abnormis*, King, Trans. Ent. Soc. N.S.W. ii, p. 24 (1873).

*Syzeton laetus*, Blackb., Trans. Roy. Soc. S. Austr. xiv, 2, p. 337 (1891).

♂. *Xylophilus major*, Pic, Bull. Soc. Ent. Fr. 1912, p. 48; Ann. Soc. Ent. Fr. 1912, p. 286.

*Hab.* AUSTRALIA, New South Wales, Victoria.

The additional synonymy of this species has already been noted by me elsewhere [Ann. and Mag. Nat. Hist. (8) xvi, p. 221]. Blackburn described both sexes, but the type acquired by the British Museum is a ♀. This is one of the two species (*S. laetus* and *S. lateralis*) he included in his genus *Syzeton* (*Xylophilus* being unknown to him), which do not differ structurally from many other *Xylophili* from other parts of the world. King specially noted the minute penultimate joint of the tarsi in his *A. abnormis*. Pic's type of *H. major* is a large ♂.

### 52. *Xylophilus undatus*.

*Xylophilus fasciatus*, Boh., Col. Res. Eugen. p. 107 (1858)  
(*nec* Melsh. 1846).

*Xylophilus undatus*, Gemm., Col. Hefte, vi, p. 123 (1870).

*Syzeton blackburni*, Lea, Proc. Linn. Soc. N.S.W. (2) ix,  
p. 621 (1895).

*Hylophilus walesianus*, Pic, Bull. Soc. Ent. Fr. 1912, p. 48;  
Ann. Soc. Ent. Fr. 1912, p. 285.

*Hab.* AUSTRALIA, New South Wales.

Pic's co-types of *H. walesianus*, two males, captured by Mr. Bryant, agree exactly with Lea's description of the same sex of his *S. blackburni*, the strongly curved posterior femora being noted by each of them; Lea, however, omitted to mention the sinuate inner margin of the anterior tibiae, the apices of which are also armed with a slender tooth. It is unusual to find a sexual modification in all the legs, such as occurs in the ♂ of the present species. Boheman's name is preoccupied, and his type was probably a female.\* All three authors give Sydney as locality.

### 53. *Xylophilus eucalypti*.

*Xylophilus eucalypti*, Lea, Proc. Linn. Soc. N.S.W. xxii,  
p. 589 (1897).

*Hab.* W. AUSTRALIA.

\* *X. (Syzeton) lateralis*, Blackb., type ♀, is somewhat similar, but it has differently formed antennae, and the black marking on the elytra broader, the elytra themselves more coarsely and not so closely punctate, and furnished with long, erect hairs amongst the conspicuous decumbent pubescence. The specific name is preoccupied in the genus (Gredler, 1866) and is here changed to *victoriensis*.

A specimen (♀?) from W. Australia (found by *Du Boulay*) in the British Museum, ex coll. Fry, agrees with *Lea's* description of *X. eucalypti*: it has the antennae (the basal joint excepted) and prothorax rufo-testaceous, the former rather short and slender. Two others, from the same source, with the antennae much longer, stouter, and a little darker, and the prothorax piceous or black, seem to be males of the same species. They all have the elytra flattened, very minutely punctate, and with an unusually deep post-basal depression; and the deep basal depression on the prothorax divided in the middle by a short carina. The types were beaten from the boughs of young gum trees.

#### 54. *Xylophilus morulus*.

*Xylophilus morulus*, Champ., Trans. Ent. Soc. Lond. 1895, p. 250 (♂) (June 1st).

*Lea* in 1897 sunk *X. morulus*, from Tasmania, as a synonym of his *Syzetoninus impressicollis*, from Galston, N.S.W. [Proc. Linn. Soc. N.S.W. (2) ix, p. 624, March 28th, 1895], the type in each case being a ♂. This synonymy is incorrect, neither the Tasmanian ♂, nor a ♀ from Tasmania doubtfully referred to the same species, agreeing with his description of *S. impressicollis*. *X. morulus*, ♂, is an elongate, flattened insect, with long, parallel-sided elytra, the punctuation of which is uniformly fine and dense throughout, and long antennae.

#### 55. *Xylophilus darwinensis*, n. sp.

♀. Oblong, depressed, opaque, the elytra shining, finely pubescent; testaceous, the head slightly infusate, the eyes black, the elytra with a narrow, faint, brown submedian fascia; closely, minutely, the elytra more distinctly, punctate. Head short, very little wider than the prothorax; eyes convex, distant, occupying nearly the whole of the sides of the head, feebly emarginate; antennae short, slender, joints 1 and 2 rather stout, 3 not longer than 2, 3-10 gradually becoming wider, 8-10 transverse, 11 acuminate-ovate, rather stout. Prothorax strongly transverse, narrowed in front, shallowly bifoveate at the base. Elytra oblong, wider than the head, somewhat rounded at the sides, transversely depressed below the base. Legs short, slender, the posterior femora slightly thickened.

Length  $1\frac{2}{5}$ , breadth  $\frac{3}{8}$  mm.

*Hab.* N.W. AUSTRALIA, Port Darwin (*J. J. Walker*).

A minute, delicate, oblong, pallid form, with faintly fusco-unifasciate elytra, a very short prothorax, and short, slender limbs. The much larger *X. arcuaticeps*, Pic, from Queensland, is the only Australian species known to me at all approaching *X. darwinensis*.

56. *Xylophilus luniger*, n. sp. (Plate II. figs. 25, 25a, ♂.)

♂. Oblong, shining, finely pubescent, testaceous, the eyes black; head sparsely, the prothorax densely, minutely, the elytra closely, rather coarsely, punctate. Head short, wider than the prothorax, narrowly extended on each side behind the eyes, the latter rather small, distant, feebly emarginate; antennae (fig. 25a) long, rather stout, abnormal—joints 3 and 4 closely, and 5–11 loosely, articulated, 1 stout, oval, 2 short, subglobose, 3 very small, narrow, shorter than 2, 4 oblong, stout, 5 and 6 much shorter, 7 large, crescentiform, 8 oblong, curved, articulated with 7 at the outer horn of the crescent, and dentate at the base within, 9 somewhat similar, curved, produced into a tooth at the inner apical angle, 10 short, 11 stout, ovate. Prothorax narrow, about as long as broad, subquadrate, narrowed in front, obsolete bifoveate at the base. Elytra rather broad, oblong, subparallel, a little narrowed anteriorly, deeply transversely depressed below the base. Legs long, slender; posterior femora moderately incrassate; posterior tibiae gradually widened to the apex.

♀. Head less extended outwards behind the eyes (appearing narrowed behind them); antennae normal—short, slender, the last three joints dilated into a loosely-articulated club, 3 and 4 each about as long as 2, 5–8 a little shorter and gradually widening, 9 and 10 strongly transverse, 11 ovate; prothorax broader and more transverse; elytra much broader, rapidly narrowing from about the middle forwards.

Length  $1\frac{1}{3}$ – $1\frac{2}{3}$ , breadth  $\frac{2}{5}$ – $\frac{1}{5}$  mm. (♂ ♀.)

*Hab.* MOKO HINOU ISLAND, off North Island, New Zealand.

One pair, from Dr. Sharp's collection, received by him (apparently from Captain Broun) under the MS. name *Sacium ochraceum*, and as the sexes of the same species. The extraordinary structure of the ♂ antenna is suggestive of that of various *Bythini*, the modified, loosely-articulated joints 7–9 together forming a clasping-organ. The ♀ has normal antennae, formed as in the same sex of *X. coloratus*, Broun, from New Zealand, which, indeed, is very like the

present species, except that the latter has shorter antennae, uniformly testaceous elytra, and shallow prothoracic foveae. *X. xenarthrus*, Broun,\* from Raurimu, must be a nearly allied form; but (allowing for joints 3 and 4 of the ♂ antenna having been wrongly counted as one joint) the antennal structure by no means accords with that of the present insect, two asymmetrical joints only being given for the Raurimu insect.

*South African Species.*

57. *Xylophilus albopilosus*, n. sp.

♂. Moderately elongate, convex, shining; black, the palpi, the apex of the terminal joint of the antennae, a large humeral patch on each elytron, the tarsi and the extreme base of the tibiae, testaceous; densely, finely, the elytra coarsely, punctate; clothed with long, adpressed, cinereous hairs. Head short, broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae long, rather stout, joint 2 very short, 3-10 subequal, slightly longer than broad, 11 nearly as long as 9 and 10 united, obliquely acuminate. Prothorax narrower than the head, transversely subquadrate, narrowed in front, obsoletely canaliculate towards the base. Elytra moderately elongate, much wider than the head, gradually narrowed from the base, rounded at the apex, with a deep, oblique intra-humeral depression. Legs long, stout; anterior tibiae slightly curved inwards at the apex, and finely mucronate at the inner apical angle; posterior femora stout, clavate; basal joint of posterior tarsi curved.

Length  $2\frac{1}{10}$ , breadth  $\frac{9}{10}$  mm.

*Hab.* S. AFRICA, Malvern, Natal (*G. A. K. Marshall*).

One male, captured in August 1897. A rather elongate, convex, shining, black insect, with a large humeral patch and the tarsi testaceous, the body clothed with long, cinereous hairs. The system of coloration is common to various other members of the genus. *X. natalensis*, Pic, is a very different insect. There are various Eastern and American species closely related to *X. albopilosus*.

58. *Xylophilus macrocephalus*, n. sp.

Moderately elongate, rather convex, shining, sparsely, finely pubescent; obscure testaceous, the legs (the infusate posterior

\* Bull. New Zealand Institute, No. 1, p. 54 (August 30, 1910).



femora and apex of the posterior tibiae excepted) paler, the eyes black, the antennae (the third joint excepted), the suture and the inflexed lateral portion of the elytra to about the middle, and the under surface in part, piceous; densely, finely, the elytra more coarsely, punctate. Head (with the labrum) about as long as broad, convex, much developed behind the eyes, the latter small, prominent, transverse, emarginate; antennae moderately long, joint 3 very small, shorter than 2, 4-8 [9-11 broken off] rather stout, about as long as broad. Prothorax narrow, nearly as long as broad, abruptly narrowed in front, with a deep transverse depression before the base. Elytra convex, oblong, somewhat narrowed anteriorly, at the middle nearly twice as wide as the head, transversely depressed below the base. Legs long, rather slender; posterior femora moderately incrassate; posterior tibiae somewhat thickened; basal joint of posterior tarsi curved.

Length  $2\frac{1}{10}$ , breadth (elytra)  $\frac{9}{10}$  mm. ( $\sigma$ ?)

*Hab.* S. AFRICA, Malvern, Natal (*G. A. K. Marshall*).

One specimen, captured in June 1897. Recognisable by the rather elongate head, small eyes, narrow prothorax, minute third antennal joint, comparatively broad, convex, oblong elytra, and long legs. Amongst the numerous species here described, *X. macrocephalus* seems to come nearest to *X. parvicollis*, Ch., from Assam. It bears no relationship to *X. femoratus*, Fairm., from Port Elizabeth.

#### 59. *Xylophilus ovalis*, n. sp. (Plate II, fig. 26.)

Oblong-oval, convex, subopaque (till denuded); rufo-testaceous, the eyes black, clothed with a very fine sericeous pubescence; the entire upper surface densely, minutely punctate. Head short, broad, obliquely narrowed anteriorly (subtriangular as seen from above), very narrowly extended on each side behind the eyes, the latter small, transverse, entire; antennae inserted at some distance before the eyes, short, rather stout, widening outwards, joints 2 and 3 subequal in length, 4 a little shorter than 3, 5-10 gradually becoming shorter and wider, 5 and 6 about as long as broad, 7-10 transverse, 11 ovate, obliquely acuminate; apical joint of maxillary palpi subsecuriform, somewhat rounded at the inner angle. Prothorax large, strongly transverse, trapezoidal, at the prominent anterior angles a little wider than the head with the eyes, almost unimpressed. Elytra broad, oval, moderately long, slightly flattened at the base. Legs rather short, slender, the posterior femora very little stouter than the others.

Length 2, breadth 1 mm. ( $\sigma$ ?)

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*Hab.* MASHONALAND, Salisbury (*G. A. K. Marshall*).

One specimen, captured in April 1900. This species could perhaps be referred to the section *Olotelus*, Muls.; it is closely related to the widely distributed *X. pallescens*, Woll. (the type of which was from Madeira); but differs from that insect in its much larger size, broader, more convex, oval shape, relatively wider prothorax, etc.

*South American Species.*

60. *Xylophilus ingens*, n. sp. (Plate II, fig. 27,  
posterior leg, ♂.)

Elongate, broad, robust, dull (till denuded); ferruginous or obscure ferruginous, the eyes black, the head in part, a broad space down the middle of the prothorax, the antennae towards the tip, and the posterior femora and tibiae in part in ♀, piceous, the elytra reddish-brown, with an indication of a common v-shaped dark mark before the apex (in ♂); densely, finely, the elytra more coarsely, punctate; closely pubescent, the pubescence (in ♂) condensed into a common triangular patch within the v-shaped subapical mark. Head short, broad, convex; eyes large, very deeply emarginate, not nearly reaching the base of the head, separated by less than half their own width in both sexes; antennae (♂) very stout, moderately long, joint 2 a little shorter than 3, 3-10 rapidly widening, 3-6 about as long as broad, 7-10 transverse [11 wanting]. Prothorax much narrower than the head, transversely quadrate, abruptly narrowed in front, unimpressed. Elytra broad, long, subparallel, flattened on the disc, rounded at the tip, obliquely compressed on each side below the humeri and with a deep oblique depression on the disc anteriorly. Legs long, stout, more slender in ♀; intermediate tibiae slightly curved; posterior femora (♂) moderately incrassate, simple; posterior tibiae straight, armed at the apex above with a long, stout, pallid spine in ♂ (fig. 27), and with a smaller slender spine in ♀;\* basal joint of posterior tarsi slightly curved.

Length  $3\frac{1}{3}$ - $3\frac{1}{2}$ , breadth  $1\frac{1}{4}$ - $1\frac{1}{2}$  mm. (♂ ♀)

*Hab.* BRAZIL, Santa Catharina (*Fry*).

One pair, the ♀ in bad condition and wanting joints 5-11 of the antennae. Near *X. lacertosus*, Ch., from Guatemala, but with very differently formed legs in the ♂. The stout spine at the apex of the ♂ posterior tibiae is

\* The female of the allied *X. mexicanus*, Ch. (found by Truqui), has a similar spine at the apex of the posterior tibiae.

a peculiar character, the slender spine in the ♀ corresponding to the tuft of hairs present in the same sex of *X. lacertosus*, *forticornis*, *humeralis*, and *v-notatus*. The male probably has a long apical joint to the antennae.

#### 61. *Xylophilus forticornis*, Champ.

The types of this species were from Chiriqui, Panama, and Pic (Ann. Soc. Ent. Fr. 1912, p. 281) has since recorded it from Trinidad, from a ♀ found by Mr. Bryant. In the Fry collection there is a ♀ from Rio de Janeiro with the elytra uniformly fuscous, and the pubescence not condensed into definite markings or fasciae, which must, for the present, be referred to the same species. *X. (Elonus) crassicornis*, Pic, from Santa Rita, Boa Sorta, and Petropolis, seems to be an allied form with enormously developed posterior femora in ♂; *X. (Elonus) distincticornis*, Pic, from Pernambuco, has the head and prothorax partly reddish.

#### 62. *Xylophilus triguttatus*, n. sp. (Plate II, fig. 28, ♂.)

♂. Oblong, rather convex, shining, sparsely, finely pubescent; head, basal joint of antennae, prothorax, posterior femora, and the intermediate femora at the middle, nigro-piceous or black, the rest of the legs and antennae, and the palpi, testaceous; the elytra testaceous, with a common, transverse, triangular scutellar patch, and a broad space at the middle of the disc (extending from near the suture to the outer margin and there continued forwards to near the humeri), nigro-piceous; closely, finely, the elytra more coarsely, punctate. Head short, broad, extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae rather stout, moderately long, joint 3 slightly longer than 2, 4-10 subequal, as long as broad, 4 a little stouter than 3, 11 nearly as long as 9 and 10 united, ovate, obliquely acuminate. Prothorax subquadrate, convex, much narrower than the head, nearly as long as broad, narrowed in front, the disc shallowly transversely grooved on each side at about the middle. Elytra wider than the head, somewhat rounded at the sides, gradually narrowed from a little below the base, with a deep, oblique, intra-humeral depression. Legs rather stout, moderately long; anterior tibiae slightly curved, subangularly dilated on the inner side beyond the middle, and armed with a long, sharp mucro at the inner apical angle; posterior femora stout, strongly clavate, abruptly excavate

at the apex in front (appearing subangularly inflated on the anterior aspect); basal joint of posterior tarsi curved.

Length 2, breadth  $\frac{4}{5}$  mm.

*Hab.* BRAZIL, Rio de Janeiro (*ex coll. Pascoe*).

One male. Recognisable by the dark head, prothorax, and basal joint of the antennae, the testaceous, nigro-trimaculate elytra, and the peculiarly formed posterior femora of the male, the insect in this respect approaching *X. 4-signatus*, Ch., from Chiriqui.

### 63. *Xylophilus suturifer*.

*Xylophilus (Zonantes) cinctipennis*, Champ., var. ? *suturifer*, Pic, Ann. Soc. Ent. Belg. xlii, pp. 262, 266 (1898).  
*Hylophilus suturifer*, Pic, Cat. Hyloph. p. 18 (1910).

♀. Moderately elongate, rather broad, very shining, finely pubescent; head, basal joint of antennae, prothorax, under surface, and posterior femora (except at the base), nigro-piceous, the rest of the antennae and legs, and the palpi, testaceous; elytra testaceous, with a common triangular scutellar patch, two oblong, transversely placed, subconfluent patches on the outer part of the disc (the marginal one a little longer than the other), the suture towards the apex, and the apical margin narrowly, nigro-piceous; closely, finely, the elytra more coarsely, punctate. Head short, broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and separated by about half their own width; antennae rather stout, moderately long, joint 3 a little longer than 2, 4-10 stouter, very gradually decreasing in length, 10 transverse, 11 acuminate-ovate. Prothorax broader than long, subquadrate, much narrower than the head, transversely grooved across the middle. Elytra long, rather broad, narrowing from about the middle, transversely depressed below the base, and with an oblique intra-humeral depression. Legs long, rather stout; posterior femora stout, clavate; basal joint of posterior tarsi curved.

Length  $2\frac{3}{4}$ , breadth  $1\frac{1}{6}$  mm.

*Hab.* BRAZIL (*ex coll. Bowring*), Boa Sorta [types].

One specimen, apparently referable to *X. suturifer*, Pic. This insect is so closely related to *X. triguttatus*, from Rio de Janeiro, the ♂ only of which is known, that I at first treated it as a variety of the ♀ of that species; it has, however, much more elongate elytra, and the dark markings at the middle of the disc are in the form of two oblong,

transversely placed, subconfluent patches. The example before me is without locality-label, but there can be little doubt that it is from Brazil. The sexual characters were not mentioned by Pic, and his types may be females.

#### 64. *Xylophilus brasiliensis*.

*Xylophilus* (? *Zonantes*) *brasiliensis*, Pic, Ann. Soc. Ent. Belg. xlii, pp. 262, 265 (1898).

♀. Oblong, somewhat convex, very shining, clothed with long, adpressed, pallid hairs; head, basal joint of antennae above, prothorax, a large triangular patch on the outer part of each elytron at about the middle (extending obliquely inwards to near the suture), the posterior femora (except at the base), and the under surface in great part, nigro-piceous or piceous, the rest of the antennae, elytra, and legs, and the palpi, testaceous; closely, finely, the elytra coarsely, punctate. Head short, broad, narrowly extended on each side behind the eyes, the latter very large, emarginate, and somewhat narrowly separated; antennae moderately long, rather stout, joint 3 a little longer than 2, 4-10 very gradually decreasing in length, 10 transverse, 11 acuminate-ovate. Prothorax a little narrower than the head, transverse, subquadrate. Elytra moderately long, subparallel to about the middle, with a deep, oblique intra-humeral depression, a space on each side of the suture thus appearing tumid. Legs long; posterior femora stout, clavate; basal joint of posterior tarsi curved.

Length  $2\frac{1}{2}$ , breadth 1 mm.

*Hab.* BRAZIL, Rio de Janeiro (*Fry*), Boa Sorta and Petropolis [types].

Two specimens, apparently females. Very like the insect here identified as *X. suturifer*, Pic, but with a relatively broader prothorax, the elytra shorter and wanting the scutellar patch, the large triangular lateral patch extending obliquely inwards to near the suture. The types of *X. brasiliensis* not having been seen by me, a description is given of the examples in the British Museum; the male is stated to have very stout posterior femora.

#### 65. *Xylophilus prehensus*, n. sp. (Plate II, fig. 29, anterior leg, ♂.)

♂. Oblong, rather convex, shining, clothed with rather long, fine hairs; testaceous, the head, antennae (the tip of the eleventh joint excepted), prothorax, a transverse patch at the middle of each

elytron (not reaching the suture or outer margin), and the intermediate and posterior tibiae towards the apex, nigro-piceous or piceous; closely, finely, the elytra more coarsely, punctate. Head very broad, short, narrowly extended on each side behind the eyes, the latter extremely large, deeply emarginate, very narrowly separated; antennae stout, long, joint 2 short, 3 a little longer, 4-10 wider, about as broad as long, 11 stout, nearly as long as 9 and 10 united, obliquely acuminate. Prothorax convex, much narrower than the head, broader than long, subquadrate, narrowed in front, transversely depressed across the middle of the disc. Elytra wider than the head, gradually narrowed from the base, with a shallow, oblique, intra-humeral depression. Legs long, stout; femora clavate, the posterior pair very stout; anterior tibiae (fig. 29) sinuate within, abruptly bent inwards beyond the middle, and armed with a long sharp mucro at the inner apical angle; posterior tibiae widened and feebly sinuate; basal joint of posterior tarsi curved.

Length  $2\frac{1}{2}$ , breadth 1 mm.

*Hab.* AMAZONS, between Para and Santarem (H. H. Smith).

One male, received in 1875. Very like *X. chiriquensis*, ♂ (figured elsewhere by myself and also by Pic), but with the antennae stouter and not quite so long, all the femora stout and clavate (the anterior pair more thickened than usual, and the posterior pair very stout), the elytra narrowed from the base and less elongate, the eyes extremely large and subapproximate. *X. (Zonantes) brasiliensis*, Pic, the ♂ of which is known, must be an allied form, but the description does not accord with the present insect. *X. nigricollis*, Ch. (renamed *atriceps* by Pic), from Grenada and Trinidad, has the upper surface similarly coloured, but it differs in other respects. This is one of five species captured by Mr. H. H. Smith on the Amazons, each represented by a single example, two of them too imperfect for description.

#### 66. *Xylophilus obscuricolor*.

*Xylophilus* (? *Zonantes*) *obscuricolor*, Pic, Ann. Soc. Ent. Fr. 1905, pp. 261, 264, 269.

♂. Oblong, rather convex, shining, clothed with long, fine, adpressed, cinereous hairs; piceous, the head black, the mouth-parts, palpi, antennae, and legs (the outer half of the posterior femora excepted) testaceous; closely, finely, the elytra coarsely, punctate.

Head short, broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and narrowly separated; antennae rather slender, moderately long, filiform, joint 3 longer than 2, 4-7 much longer than broad, subequal [8-11 broken off]. Prothorax much narrower than the head, transversely subquadrate, abruptly narrowed in front. Elytra oblong, wider than the head, subparallel in their basal half, transversely depressed below the base, and with an oblique intra-humeral depression. Legs rather stout; anterior tibiae curved, sharply mucronate at the inner apical angle; posterior femora much thickened, clavate; posterior tibiae widened; basal joint of posterior tarsi slightly curved.

Length  $2\frac{1}{2}$ , breadth  $\frac{1}{10}$  mm.

*Hab.* BRAZIL [type], Rio de Janeiro (*Fry*), Petropolis? (*sec. Pic*).

One male, apparently referable to *X. obscuricolor*, Pic, near *X. triguttatus*, *suturifer*, *brasiliensis*, etc., but with more slender, subfiliform antennae and entirely piceous elytra. The simply curved anterior tibiae of the ♂ (a character mentioned by Pic, though not recognised by him as a sexual mark of distinction) separates *X. obscuricolor* from the same sex of *X. triguttatus*, etc. The apical joint of the antennae (wanting in the specimen before me) is said to be dilated. *X. arcuatipes*, Pic, from Brazil, is described as having similarly arcuate anterior tibiae in ♂.

#### 67. *Xylophilus rectifasciatus*, n. sp.

♀. Oblong, rather broad, moderately convex, shining, clothed with long, fine, adpressed, pallid hairs; piceous, the antennae, palpi mouth-parts, elytra (a common, transverse, laterally extended median fascia excepted), and legs (the slightly infusate posterior femora excepted), testaceous; densely, finely, the elytra a little more coarsely, punctate. Head short, moderately broad, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and somewhat narrowly separated; antennae rather slender, comparatively short, joint 3 slightly longer than 2, 4-10 subequal in length, 11 stouter, acuminate-ovate. Prothorax small, much narrower than the head, transversely subquadrate, abruptly narrowed in front. Elytra much wider than the head, subparallel in their basal half, with a shallow intra-humeral depression. Legs rather slender, the posterior pair much stouter, the femora of the latter clavate; basal joint of posterior tarsi almost straight.

Length  $2\frac{1}{2}$ , breadth 1 mm.

*Hab.* BRAZIL, Rio de Janeiro (*Fry*).

One specimen. Separable from the insects here referred to, *X. brasiliensis* and *X. suturifer*, Pic, by the more slender antennae and the more finely punctate, rectifasciate elytra. The basal joint of the antennae shows no trace of infuscation.

#### 68. *Xylophilus insularis*, n. sp.

♀. Oblong, rather broad, robust, shining, clothed with long, pallid hairs; head and a narrow, common, post-median fascia on the elytra, extending forwards along the sides, nigro-piceous, the prothorax rufo-piceous, the under surface obscure ferruginous, the rest of the elytra, the mouth-parts, antennae, and legs testaceous; closely, finely, the elytra more coarsely, punctate. Head short, very little wider than the prothorax, narrowly extended on each side behind the eyes, the latter large, deeply emarginate, and somewhat narrowly separated; antennae short, rather slender, joint 3 scarcely longer than 2, 9 and 10 transverse, 11 stout, obliquely acuminate. Prothorax convex, transverse, very gradually narrowing from the base, unimpressed. Elytra oblong, convex, broad, slightly rounded at the sides, with a shallow intra-humeral depression. Legs long, the posterior pair stout, the femora of the latter strongly clavate; basal joint of posterior tarsi arcuate.

Length  $2\frac{2}{3}$ , breadth 1 mm.

*Hab.* BRAZIL, Ilha Santo Amaro, near Santos (*G. E. Bryant*: 13. iv. 1912).

One female, somewhat discoloured. Very like *X. rectifasciatus*, from Rio de Janeiro, and similarly coloured; but larger and more convex, with a broader, less quadrate prothorax, the apical joint of the antennae stouter and more acuminate, and the basal joint of the posterior tarsi strongly arcuate. The laterally extended dark median fascia of the elytra is placed a little beyond the middle.

#### 69. *Xylophilus latefasciatus*, n. sp.

♀. Short, broad, rather convex, shining, sparsely pubescent; head, prothorax, a broad, complete median fascia on the elytra, and the posterior femora in part, black or piceous, the rest of the elytra (a large, subobsolete, triangular scutellar patch, extending downward to the median fascia, excepted) and legs, the antennae, and mouth-parts testaceous, the under surface obscure ferruginous; head rather sparsely, finely, the prothorax and elytra closely and



more coarsely, punctate. Head short, broad, narrowly subangulately extended on each side behind the eyes, the latter large, emarginate, and separated by about half their own width; antennae rather stout, comparatively short, joint 3 slightly longer than 2, 3-10 gradually decreasing in length, 8-10 transverse, 11 stout, as long as 9 and 10 united, obliquely acuminate. Prothorax strongly transverse, nearly as wide as the head, parallel-sided, almost unimpressed. Elytra short, broad, slightly rounded at the sides, unimpressed. Legs moderately long, the posterior pair stout, with the femora strongly clavate and the basal joint of the tarsi curved.

Length  $1\frac{1}{5}$ , breadth 1 mm.

*Hab.* AMAZONS, between Para and Santarem (H. H. Smith).

One specimen, assumed to be a female. A short, broad, convex form, with broadly nigro-fasciate elytra, a dark head and prothorax, and the rest of the upper surface (a faint scutellar patch excepted), the antennae, and legs (the posterior femora excepted) testaceous. A fragmentary ♂, from Tolé, Panama, provisionally placed by me under *X. aequinoctialis*, Ch. (B. C.-Am., Coleopt. iv, 2, p. 181), with the eyes much larger and subcontiguous, the triangular scutellar patch darker and well defined, and the anterior tibiae feebly curved and subsinuate within, seems to belong to the same species.

#### 70. *Xylophilus amazonicus*, n. sp.

♂. Oblong, somewhat depressed, subopaque, clothed with very fine sericeous pubescence; nigro-piceous, with the anterior margin of the prothorax and the under surface obscure ferruginous, the mouth-parts, antennae, and legs, and the base of the elytra broadly, testaceous; the entire upper surface densely, minutely punctate. Head large, broad; eyes very large, occupying the whole of the sides of the head, feebly emarginate, somewhat narrowly separated above; antennae slender, moderately long, joint 3 much longer than 2, 3-10 very gradually decreasing in length, longer than broad, 11 acuminate-ovate. Prothorax much narrower than the head, broader than long, subquadrate, narrowed in front, with a broad transverse depression before the base. Elytra oblong, much wider than the head, gradually widened to the middle, transversely depressed below the base. Legs short, slender; posterior femora moderately incrassate and with a narrow pallid pad along their lower face.

Length  $1\frac{1}{2}$ , breadth  $\frac{3}{8}$  mm.

*Hab.* AMAZONS, between Para and Santarem (*H. H. Smith*).

One specimen, assumed to be a male. Smaller and less convex than *X. flavipes* (*infra*); the elytra broadly testaceous at the base; the antennae similar, but with a smaller apical joint; the eyes much larger and subapproximate; the posterior femora with a similar narrow flavous pad beneath. The puncturing of the elytra is extremely fine.

#### 71. *Xylophilus dryophiloides*, n. sp.

♂. Oblong, dull, clothed with a fine, greyish, sericeous pubescence; nigro-piceous, the antennae, palpi, and legs (the infusate posterior femora and apices of the posterior tibiae excepted) testaceous; the entire upper surface densely, finely punctate. Head short, broad; eyes very large, feebly emarginate, separated by about half their own width, occupying the whole of the sides of the head; antennae long, rather stout, joint 2 short, 3 longer and narrower, 4-10 wider, subtriangular, subequal, longer than broad, 11 acuminate-ovate. Prothorax much narrower than the head, transverse, subquadrate, abruptly narrowed in front, confluent bifoveate at the base. Elytra oblong, much wider than the head, feebly, transversely depressed below the base. Legs short, slender; posterior femora thickened, with a narrow, projecting, pallid pad along their lower face.

Length 2, breadth 1 mm.

*Hab.* BRAZIL, San Paulo (*Fry*).

One male. This insect bears a striking resemblance to the European *Dryophilus pusillus*, Gyll., one of the Anobiidae. It is very like the same sex of *X. flavipes*, but has the antennae much longer and stouter (joints 4-10 subequal in width, 11 thus appearing relatively narrower), and the eyes larger and more approximate. The general coloration is exactly that of *X. flavipes*.

#### 72. *Xylophilus flavipes*, n. sp.

♂. Oblong, dull, finely sericeo-pubescent; nigro-piceous, the antennae, palpi, and legs (the slightly infusate posterior femora excepted) testaceous; the entire upper surface densely, finely punctate. Head short, moderately broad; eyes large, distant, feebly emarginate, occupying near the whole of the sides of the head; antennae short, slender, joints 3-10 subequal in length, but gradually becoming a little wider, 3 longer than 2, 11 stout, obliquely acuminate. Prothorax much narrower than the head, transverse,

subquadrate, abruptly narrowed in front, bifoveate at the base. Elytra oblong, much wider than the head, feebly transversely depressed below the base, the humeri rounded. Legs slender, rather short; posterior femora moderately thickened and furnished with a very narrow projecting pad along their lower face.

Length 2, breadth 1 mm.

*Hab.* BRAZIL, San Paulo (*Fry*).

One male. An oblong nigro-piceous insect, with slender testaceous limbs. The apical joint of the antennae abruptly stouter, the posterior femora with a narrow projecting pad along their lower face, much as in the same sex of *X. fragilis*, *bicolor* (renamed *championi* by Pic), *unifasciatus* and *inflatus*, Ch. *X. flavipes* is so like *X. dryophiloides*, from the same locality, that it was at first treated by me as the ♀ of the same species; the difference in the form of the antennae, however, is too great to be simply sexual,\* and the structure of the posterior femora is certainly that of a male.

### 73. *Xylophilus fuscofasciatus*, n. sp.

♀. Short, broad, subopaque, thickly clothed with fine silky pubescence; obscure ferruginous, the elytra brown, with a common, narrow, transverse, fuscous fascia just behind the middle, the antennae and legs testaceous; the entire upper surface densely, finely punctate. Head short, very little wider than the prothorax; eyes moderately large, distant, feebly emarginate, occupying almost the whole of the sides of the head; antennae short, joints 1 and 2 stout, 3-6 slender, subequal in length, 3 slightly longer than 2, 7-10 rapidly widening, 10 transverse, 11 stout, ovate, obliquely acuminate. Prothorax strongly transverse, the angles obtuse, the disc shallowly bifoveate at the base. Elytra broad, much wider than the head, somewhat rounded at the sides, shallowly, transversely depressed below the base. Legs short, slender, the posterior femora a little stouter than the others.

Length (with head retracted)  $1\frac{4}{5}$ , breadth 1 mm.

*Hab.* BRAZIL, Rio de Janeiro (*Fry*).

One specimen. A short, broad, densely punctate, sericeo-pubescent, reddish-brown insect, with broad, faintly unifasciate elytra, short, slender limbs, and very feebly emarginate eyes, which occupy almost the whole of the sides of

\* Greater than between the sexes of the European *X. (Euglenes) pygmaeus*, de Geer.

the head, the head and prothorax subequal in width. It can be placed in the section *Olotelus*.

74. **Xylophilus dentaticornis.** (Plate II, figs. 30, 30a, ♂.)

*Hylophilus dentaticornis*, Pic, Ann. Soc. Ent. Fr. 1912, p. 282.

The unique type of this extraordinary insect was captured by Mr. Bryant in Trinidad, in February 1903. It is, of course, a ♂, and to Pic's description may be added: anterior tibiae much thickened; anterior and intermediate femora, and intermediate tibiae, slender, the latter straight; posterior femora rather stout, clavate. A subcylindrical, pallid insect, with the head, and a small patch on each side of the elytra at about the middle, black; the head strongly deflexed; the eyes extremely large and contiguous in front; the antennae (fig. 30a) long, with joints 5-10 strongly dentate within and 11 crescentiform; the prothorax not much narrower than the elytra. *H. dentaticornis* should perhaps form the type of a separate genus. The general structure is suggestive of that of *Blumenophilus*, Pic (1911), type *B. externenotatus*, from Brazil, the smaller eyes and normal antennae of the latter being suggestive of ♀.

75. **Xylophilus trinitatis**, n. sp.

*Hylophilus breviramus*, Champ., var., Pic, Ann. Soc. Ent. Fr. 1912, p. 281.

♂. Elongate, rather narrow, dull, the elytra moderately shining, clothed with long, pallid, adpressed hairs; head, prothorax, and under surface, the antennae with joints 1, 2 and 11, and the tips of the rami, the anterior and intermediate femora at the apex, the posterior femora entirely, and the posterior tibiae in part, black or piceous, the rest of the antennae and legs testaceous or flavous; the elytra testaceous, with a common, transverse patch on the disc below the base, another before the apex, and a laterally-extended, complete median fascia, nigro-piceous; head densely, finely, the prothorax rugosely, and the elytra very coarsely, subconfluently, punctate. Head very large; eyes enormously developed, contiguous, deeply emarginate, occupying the whole of the sides of the head; antennae long, joints 4-10 each with a long ramus, 11 long, angularly dilated beyond the middle. Prothorax about as long as broad, narrow. Elytra not wider than the head (with the eyes),

moderately long, rather convex, subparallel. Legs long, the posterior femora strongly clavate.

♀. Prothorax and under surface rufescent; antennae normal, rather stout, moderately long, joint 2 short, 3 much longer than 2, 3-10 gradually decreasing in length, 11 stouter, acuminate-ovate, 1, 2 and 11 infusate; eyes much smaller, well separated; elytra broader than the head.

Length 2-2½, breadth ¾-1 mm. (♂ ♀.)

*Hab.* TRINIDAD (*G. E. Bryant*: ii. 1903).

One pair, treated as a var. of *X. breviramus*, Ch., from Chiriquí, but differing in various respects from that insect: the antennal rami of the ♂ are much longer, as long as in the same sex of *X. trifasciatus*, and one only of the apical joints is infusate in ♀; the elytra are relatively narrower (not wider than the head in ♂), parallel-sided, and less coarsely punctate; and the posterior femora are not so stout.

### *Antillean Species.*

#### 76. *Xylophilus halticoides*, n. sp.

Oblong, broad, robust, shining (when denuded); head, prothorax, and posterior femora nigro-piceous or piceous, the elytra reddish-brown, paler at the base, with a broad indeterminate darker space on each side, the antennae (the basal joint in part excepted) and palpi, the rest of the legs, and the under surface in great part, ferruginous or rufo-testaceous; densely, finely, the elytra more coarsely, punctate, clothed with fine adpressed pubescence. Head short, broad, narrowly extended on each side behind the eyes, the latter very large, deeply emarginate, and somewhat narrowly separated; antennae moderately long, stout, joints 2 and 3 very small, equal in length, 4-10 gradually decreasing in length, 4 twice as long as 3, 8-10 transverse, 11 acuminate-ovate. Prothorax about as wide as the head, strongly transverse, subquadrate, abruptly narrowed in front, the anterior angles rather prominent, the disc unimpressed. Elytra broad, oblong, somewhat rounded at the sides, feebly, transversely depressed below the base. Legs rather short, comparatively stout; posterior femora very stout, strongly clavate, arcuate in front; posterior tibiae and basal joint of posterior tarsi straight.

Length 2, breadth 1 mm. (♂?)

*Hab.* ANTILLES, Grenada, Mount Gay Estate, Leeward side (*H. H. Smith*).

One specimen, omitted from my 1896 list. A rather

broad, robust form, with stout rufo-testaceous antennae, dark head and prothorax, reddish-brown elytra, and the posterior femora so much thickened as to resemble those of a *Haltica*.

77. *Xylophilus atomarioides*, n. sp. (Plate II, fig. 31.)

Short, convex, oval, shining, sparsely, finely pubescent; testaceous, the eyes black, the elytra each with two, more or less confluent, oblong fuscous patches at the middle of the disc, together forming an interrupted fasaia; rather sparsely, finely, the elytra more coarsely, punctate. Head short, broad; eyes large, distant, occupying nearly the whole of the sides of the head, very feebly emarginate; antennae short, very slender, thickened at the base and towards the tip, joints 1 and 2 stout, 3-8 narrower, subequal in length, 3 about as long as 2, 9-11 wider, forming a loose club, 11 ovate, stout, blunt at the tip. Prothorax very short, narrower than the head, with two deep foveae before the base. Elytra somewhat oval, convex, much wider than the head, transversely depressed below the base. Legs short, slender, the posterior femora moderately incrassate.

Length 1, breadth  $\frac{3}{2}$  mm. (♀?)

*Hab.* ANTILLES, St. Vincent (*H. H. Smith*).

Two specimens. A minute, convex, testaceous form, with an extremely short prothorax, very different from any other species of the genus known to me. The elongate basal joint of the posterior tarsus separates it from *Cnopus*. The eyes might be described as entire, and *X. atomarioides*, therefore, approaches *Olotelus*, Muls. The examples described were placed amongst the Cryptophagids when Mr. Smith's Antillean captures were sorted, and the insect was thus omitted from my list (1896) of the Xylophilids of the Island.

Since the preceding pages have been in type, Mr. E. W. Ferguson, of Sydney, has sent me three additional species of *Xylophilus* from Australia, all apparently new, and the opportunity is taken of inserting descriptions of them at the end of this paper. They have been examined by Mr. A. M. Lea, and returned as unknown to him. The types have been presented to the British Museum.

78. *Xylophilus duplocinctus*, n. sp.

Oblong, robust, shining, somewhat coarsely pubescent; ferruginous, the head black, the legs and elytra testaceous, the latter

with two common, slightly undulate, narrow, nigro-piceous fasciae—one, at about the basal third, interrupted at the suture, the other, beyond the middle, not reaching the outer margin; elosely, finely, the elytra much more coarsely, punctate. Head large, broad, narrowly extended on each side behind the eyes, the latter very large and somewhat narrowly separated; antennae moderately long, rather stout, joint 3 a little longer than 2, 3 and 4 subequal, 5–10 slightly shorter, 11 ovate, stout, obliquely acuminate. Prothorax transversely subquadrate, narrower than the head, rather convex, feebly canaliculate down the middle posteriorly, without definite foveae. Elytra wider than the head, rather short, subparallel in their basal half, with a deep, oblique, intra-humeral depression. Legs comparatively short and stout, the posterior femora clavate, the basal joint of the posterior tarsi curved and about half the length of the tibia.

Length  $2\frac{1}{5}$  mm. ( $\delta$ ?)

*Hab.* QUEENSLAND, Cairns (*Ferguson*).

One specimen, in good condition. Not unlike *X. ceylonicus*, Pic, but with a black head, and more coarsely punctate, nigro-bifasciate elytra. There are also many allied tropical American forms.

#### 79. *Xylophilus fergusoni*, n. sp.

$\delta$ . Oblong, rather convex, shining, clothed with very fine, silky, cinereous pubescence; black, the head (the eyes excepted), palpi, joints 1–3 of the antennae, the prothorax, and legs rufo-testaceous or testaceous; the head and prothorax sparsely, the elytra elosely and much more distinctly, punctate. Head broad, transverse; eyes large, separated by about one-half their own width (as seen from in front), and extending outwards beyond the very short post-ocular portion of the head; antennae long, not very slender, joint 3 short, slightly longer than 2, 4–10 longer and thicker, obovate, subequal in length, 11 stout, nearly as long as 9 and 10 mited, obliquely acuminate. Prothorax narrow, subquadrate, broader than long, with two deep transverse impressions at the base and an indication of a shallow transverse groove in front of this. Elytra oblong, nearly twice as wide as the prothorax, subparallel in their basal half, flattened on the disc and obliquely depressed below the base, the sutural region tumid towards the apex. Legs long, slender; anterior and intermediate tibiae feebly curved; posterior tibiae distinctly sinuate, rapidly widened outwards, truncate at the apex, and closely set with short hairs behind the

inner apical angle; basal joint of posterior tarsi elongate, very slender, straight, more than half the length of the tibia.

Length 2 mm.

*Hab.* NEW SOUTH WALES, Sydney (*Ferguson*).

One male, in perfect condition. An isolated form, with peculiarly shaped posterior tibiae in the male, a rufo-testaceous head and prothorax, and black, sericeo-pubescent elytra. The exposed penis-sheath is long and slender.

#### 80. *Xylophilus fracticollis*, n. sp.

Short, shining, finely pubescent; head (except in front) and prothorax nigro-piceous, the basal and apical margins of the latter rufescent, the antennae (the infusate apical joint excepted), elytra, and legs testaceous, the under surface obscure ferruginous; head and prothorax very finely, sparsely, the elytra closely and more strongly, punctate. Head broad, narrowly extended on each side behind the eyes, the latter large and separated by about their own width (as seen from above); antennae short, slender, thickened towards the tip, joints 1 and 2 also stout, 3 small, 4-6 longer, subequal, 10 transverse, 11 ovate, stouter than the preceding joints. Prothorax small, transversely subquadrate, grooved across the middle, and with a very deep, transverse, mesially interrupted, depression before the base. Elytra about twice as broad as the prothorax, short, subparallel in their basal half, deeply, transversely depressed below the base. Legs slender, the posterior pair not very elongate, their tibiae straight, gradually widened from the base to the apex (thus appearing elongate-triangular), the basal joint of their tarsi more than half the length of the tibia.

Length  $1\frac{1}{3}$  mm. ( $\sigma$ ?)

*Hab.* NEW SOUTH WALES, Sydney (*Ferguson*).

One specimen, somewhat crushed, but with the head, antennae, and prothorax uninjured, and the insect in sufficiently good condition for description. The subclavate antennae, the transversely grooved, deeply impressed prothorax (much as in *X. malaccanus*), and the gradually widened posterior tibiae, are characteristic. Compared with *X. malaccanus*, the present insect is less elongate and very differently coloured, and the antennae are otherwise formed.

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#### EXPLANATION OF PLATES I, II.

[See *Explanations facing the PLATES.*]